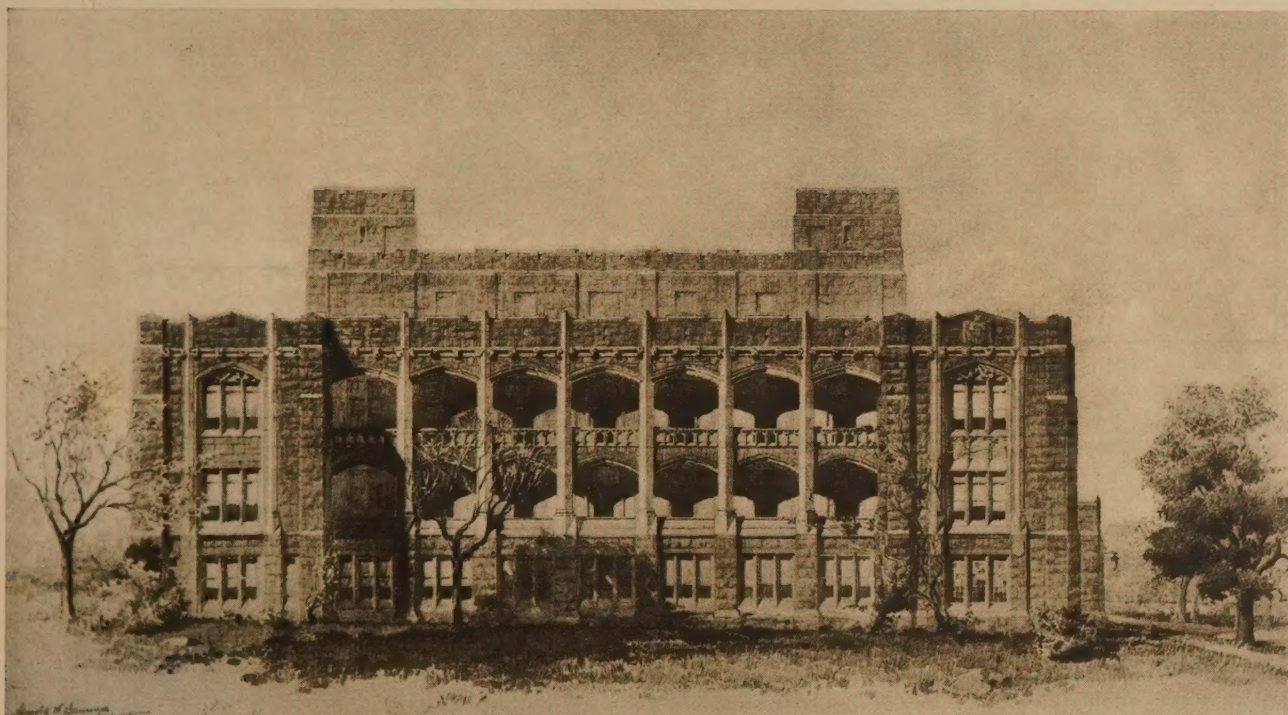
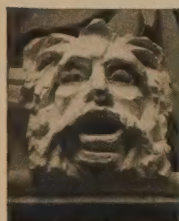


Cadet Hospital, U. S. Military Academy, West Point, N. Y.

Arnold W. Brunner, Architect



South elevation, Cadet Hospital, U. S. Military Academy, West Point, N. Y.



THE United States Military Academy at West Point occupies a commanding site on the west bank of the Hudson River and when viewed from a distance presents a most unusual and picturesque appearance.

When we approach it from the steamboat-landing we follow the road that skirts the Riding Hall, winds around the Administration Building and

Post Headquarters, passes under a great arch and curves up to a plateau on the higher level.

Here we find the Academic Buildings massed around great open spaces, the Parade, the Athletic Field, perfect roads and splendid trees. Many of the buildings are of considerable age, others of more recent date, and they form a notable group, remarkable for a certain quality, difficult to define, but essentially characteristic of West Point.

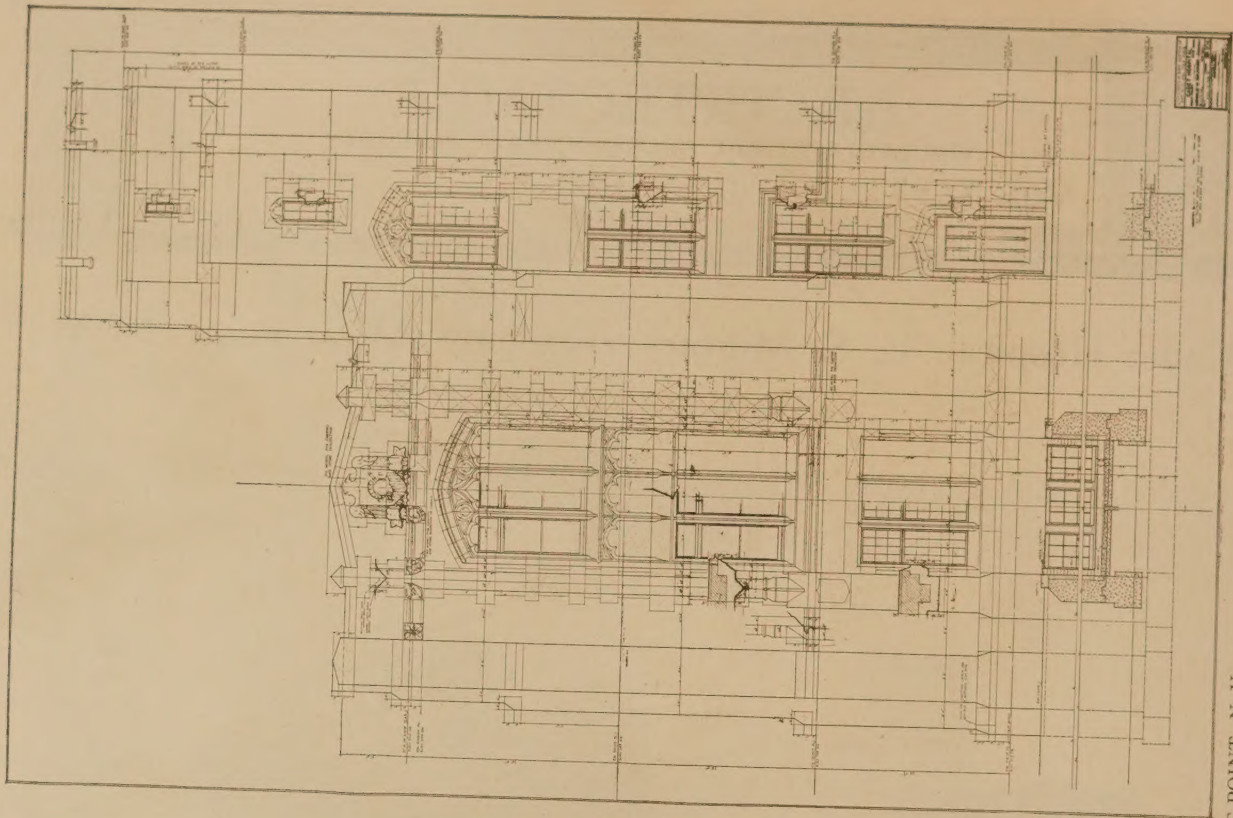
This picturesque quality which is so marked when the

group is viewed from the river is not lost on closer inspection. With few exceptions these buildings are what may be called "Military Gothic," or variations of it, and a serious effort has been made to design the new Cadet Hospital so that it will conform to the spirit of the group, harmonize with it, and take its place in the composition without quarrelling with its neighbors.

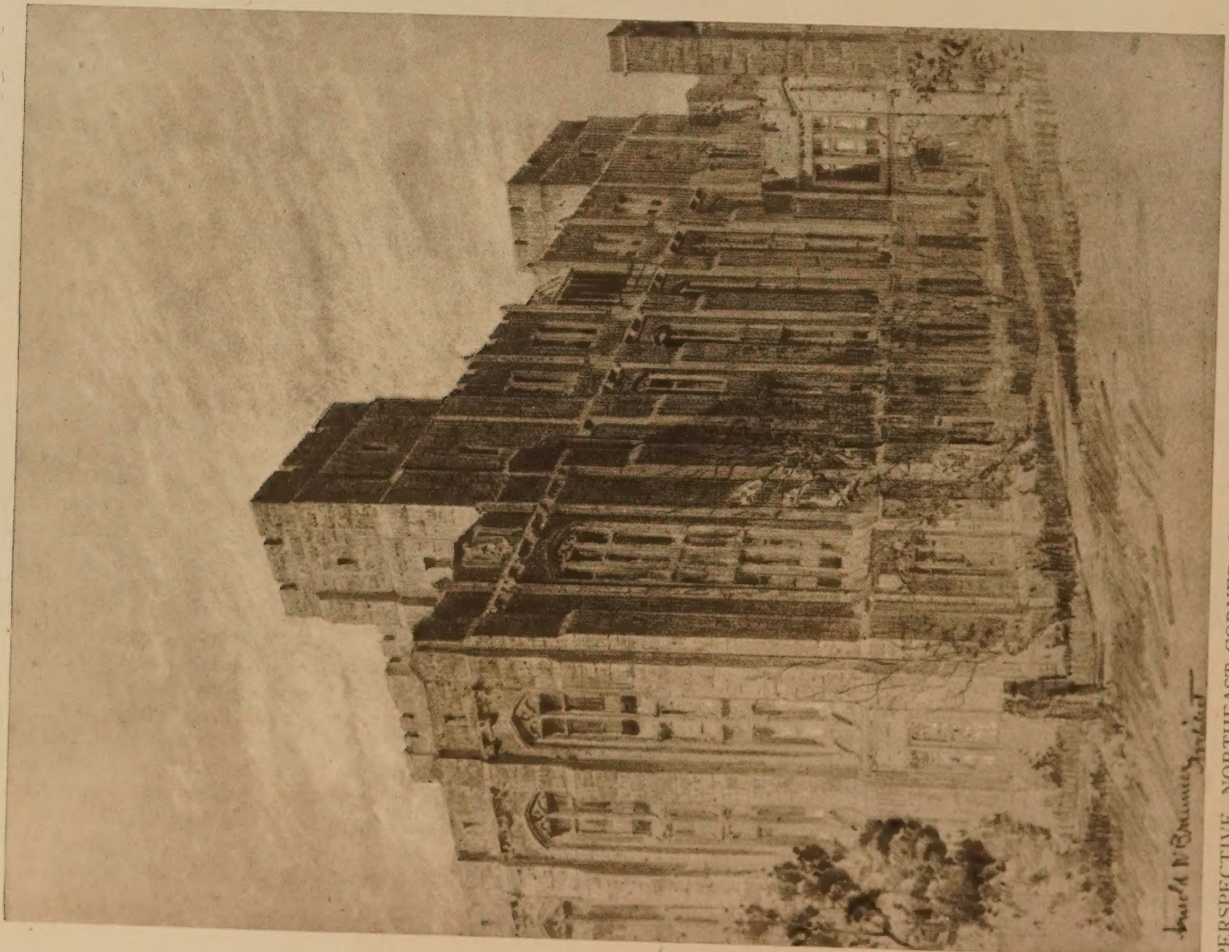
The same materials have been employed in its construction and the same combination of rough native stone with tooled limestone that have been generally used are here adopted so the new hospital will not appear as an architectural stranger.

Military Gothic, or any variety of Gothic, did not at first seem to be exactly suitable for a hospital, but after considerable study it was found entirely possible to retain the essentials of the style and at the same time meet the requirements of modern hospital construction.

As may be seen by the plan the wards and private rooms are properly proportioned and well lighted. The



Arnold W. Brunner, Architect,



PERSPECTIVE, NORTHEAST CORNER, CADET HOSPITAL, U. S. MILITARY ACADEMY, WEST POINT, N. Y.

windows present on the inside square heads with the necessary transoms. The towers are not merely for ornament but are utilized for stairs and elevators. Generally there are no dark corners, no waste spaces, and no unnecessary extravagance.

Very little carving has been used on the exterior; what there is of it, such as the ornamentation of the entrance-porch and the stone corbels in the moulded course above the third story, has been skilfully modelled by Mr. C. H. Humphriss, who has caught the Gothic spirit.

The present hospital is not to be abandoned, but its interior arrangement will be altered, and it will be connected with the new building, which will adjoin it on the south.

The enlargement of the Cadet Hospital at West Point was made necessary by the very considerable increase in the corps of cadets in recent years. Facilities were also much needed to carry on X-ray and other diagnostic and treatment

procedures, which were not provided for at the time the present building was constructed, many years ago. The new building is, in effect, a complete hospital. The old building will be made use of for dental clinics, offices, quarters for personnel, and for storage of supplies.

The hospital is intended to provide all the facilities for the treatment of cases of illness and injury which may arise among the corps of cadets and among the officers and civilian population, which number altogether about three thousand. The bed capacity will be about one hundred, with the possibility of expansion in emergency to about one hundred and forty beds.

The basement provides for storage of medical and surgical supplies, an issue storeroom, a clothing-room, a post-mortem room, and a morgue.

The first floor contains administrative and record offices and the out-patient clinic. Near the ambulance entrance at the rear is located the admission ward, with provision for the care of medical and surgical emergencies, and with beds for isolation and observation. A room is provided in

which physical examinations of men in large groups can be carried on. Adequate provision is made for electro and hydro therapeutic treatment, eye, ear, nose and throat, and X-ray work. The laboratory will furnish facilities for carrying on the usual work of a hospital of this size.

Both the second and third floors are ward floors. Each has two main wards with four smaller wards, or private rooms. Large doors open from all wards and private rooms on to porches, with southern exposure. Two study rooms

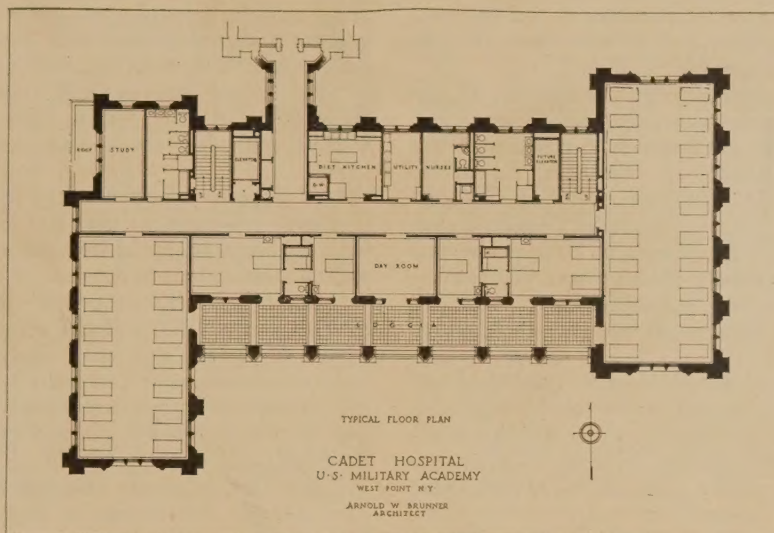
are provided on each floor. Diets will be taken from the main kitchen in insulated containers, carried by dumbwaiter to the diet-kitchens, where the trays will be prepared. Diet-kitchens will be provided with gas-range, with oven and plate-warmer, serving-table, refrigerator, dish-closet, tray-racks, and carriages. Utility rooms will be fully equipped with the usual number of approved fixtures.

On the fourth floor is located the operating suite, consisting of operating-

room, sterilizing, dressing, and instrument rooms, and a room for the treatment of septic cases. At either end of the suite are dressing-rooms for nurses and surgeon, each provided with lockers, showers, and lavatory. A roof-garden is provided for on this floor, with southern exposure, readily accessible by elevator.

Work on the new hospital is progressing rapidly, and it is expected that the building will be ready for occupancy in the fall. The quality of both materials and workmanship is distinctly above the average, as it is being erected under the supervision of the constructing quartermaster, Colonel E. J. Timberlake, who is giving his personal supervision to all of the details. Colonel Timberlake is assisted by Mr. Wm. F. Goding, superintendent of construction.

The plans were made in consultation with Colonel F. P. Reynolds, chief medical officer, and received the benefit of his advice and experience. Colonel Reynolds, who saw extensive service in the World War, is thoroughly familiar with West Point conditions, so there is no doubt that the new hospital will perfectly fit the requirements.



Stone carvings, Cadet Hospital, U. S. Military Academy, West Point, N. Y.

The Fifty-fifth Annual Convention of the American Institute of Architects

"TO organize and unite in fellowship the architects of the United States of America, to combine their efforts so as to promote the æsthetic, scientific, and practical efficiency of the profession, and to make the profession of ever-increasing service to the country."

The above declaration of the purposes of the Institute were never made more manifest than at the convention that was held this year in Chicago, June 7, 8, 9.

It was the general impression that it was one of the liveliest and most *unified* conventions ever held.

Thanks are due to the gentlemen who constituted the Convention Committee, Daniel H. Burnham, Edwin H. Clark, F. S. Davidson, N. Max Dunning, Alfred H. Granger, John Holabird, Elmer C. Jensen, George W. Maher, Irving K. Pond, Charles H. Prindle, Francis W. Puckey, Howard Shaw, Clark C. Wright, Albert Moore Saxe, W. Stanley Parker, C. Hendrick Hammond, and especially to Mr. E. C. Kemper, the efficient and experienced executive secretary of the Institute.

The new officers elected are: William B. Faville, of San Francisco, president; E. J. Russell, of St. Louis, first vice-president; Robert D. Kohn, of New York, second vice-president. New directors: First District, William B. Emerson, Boston; W. L. Steele, Sioux City, Iowa; B. W. Morris, New York.

The retiring president, Henry H. Kendall, of Boston, presided with genial good nature combined with a decision that kept the house in order and the sessions moving with smoothness and without unnecessary waste of time. He announced that the anonymous gift a year ago of \$25,000 to the Institute, now amounting to \$27,000, was hereafter to be known as the Waid Educational Fund, the gift of D. Everett Waid, the Institute's treasurer, and Mrs. Wade, his partner, who by the way made a most graceful and engaging address in response to the enthusiastic demand.

No doubt the Chicago men will be given full credit for the snap and interest displayed in the proceedings, and certainly it would be hard for any one to miss the inspiration and vitality of this wonderful city of the Lakes. It was a Chicago convention in the best sense of the term and went at the work and engaged in the various discussions with a real Chicago spirit.

Not even the great heat of the convention hall could diminish the ardor and good nature of those concerned.

Some would have to go out now and then for air, but came back into the room with a determination to see it through in spite of a little matter of a thermometer that was trying to hit the ceiling. The windows that looked out on the beautiful colors of Lake Michigan were early pre-empted, but the breezes that came fitfully in were not from a lake of cold water, rather from one that the late Mr. Dante knew so well how to describe.

One of the delightful treats in connection with the sessions was the afternoon given to a motor tour of the beautiful North Shore, a veritable revelation to those who had never before had the privilege of seeing the country that extends along the shore northward with ever-enticing vistas of the opalescent, ever-changing colors of the lake.

Through the kindness of many friends who generously offered their private cars for the purpose, this excursion, covering nearly eighty miles, was most interesting and in-

structive. The guests were privileged to inspect the beautiful private homes of Mr. Stonehill, Stonehill House, designed by Mr. Howard Shaw; the Harold McCormick House, by Charles A. Platt; and the Edward Ryerson House, also by Mr. Shaw. All of these had special and individual architectural features of great interest, and few will ever forget the beautiful gardens and lovely landscape vistas that added such a note of friendly intimacy to the Ryerson estate. House and grounds composed a harmony that made you feel that despite their luxury and cost, there was yet embodied the human motive that made it a real home.

A supper was served at the Indian Hill Golf Club in a landscape environment that was lovely in its quiet setting, with the broad sweeps of lawn relieved by the gleam of water and clusters of beautiful trees.

One of the fortunate guests wishes to again give thanks for this journey that included some instruction and a great big lot of the joy that only lovely landscape and pleasant human companionship can really bring.

It was an appreciative crowd that climbed out of the cars to visit the show-places and spend the twilight enjoying the hospitality of the golf club.

Men from all parts of the country met at the convention in a friendly interchange of impressions and ideas about their profession, and here, away from the formalities, they sat at table or walked about in a mood that no city environment could ever bring.

The gold medal of the Institute was awarded to Henry Bacon for his great contribution to our national memorials in the designing of the magnificent Lincoln Memorial.

Other medals awarded were to Arthur F. Matthews, of San Francisco, for decorative painting, and Mr. F. W. Goudy for his work in artistic typography.

The convention closed with a dinner in the old Fine Arts Building, designed for the World's Fair by C. B. Atwood, a thing of beauty in its day, of almost greater beauty in its dilapidation and decay. It is exquisite in color and its noble setting and dignity of mass and detail filled one's thoughts with memories of the old temples of Greece.

The membership of the institute has greatly increased, and Mr. W. B. Ittner, of St. Louis, proposed a plan by which the membership might in five years be increased to four thousand.

Membership.—It is recommended that the same five-year outlook be sought as to the institute's membership. It is believed that if this is done the institute will receive the predetermined annual increments in its membership without the waste inherent in intensive membership campaigns and other more or less spasmodic efforts. It is a bad policy for the institute to drift and thus to neglect the legitimate development of its membership as it would be to invite increased membership through any lowering of our standards. We believe a determinate policy is the only safe course. It can apparently be established statistically that there are over ten thousand men in the United States possessing, technically at any rate, the requirements for membership in the institute. This number, of course, is constantly growing. For instance, over two hundred are graduated out of the colleges into the profession every year. Especially in view of this growth in the number of those practicing architecture it would seem to be conservative to plan tentatively to have in our membership five years from now 40 per cent of those meeting our specifications at the present time. If this is done we cannot only decide on the total annual increase, but divide this increment into geographical quotas and so guard

against unwarranted pressure for membership at any point. Assuming that this plan is adopted, the membership would stand at fixed dates as follows:

Oct. 1, 1921	Jan. 1, 1922	Jan. 1, 1923	Jan. 1, 1924	Jan. 1, 1925	Jan. 1, 1926	Jan. 1, 1927
2276	2300	2525	2825	3175	3575	4000
Yearly increase provided for.....		225	300	350	400	425
Percentage increase...		10%	12%	12%	13%	12%

Ten per cent annual increase is considered only normal in growing enterprises. A study of the rates of growth in technical and scientific bodies comparable to our own shows the proposed rate of growth well below the average. In the eleven months between November 5, 1920, and October 1, 1921, the membership rose from one thousand five hundred and thirty-six to two thousand two hundred and seventy-six, an increase of seven hundred and forty, or at the rate of over 50 per cent annually.

The problem will be further simplified if we provide a junior class to which graduates of recognized schools of architecture are eligible. Apparently the only objection which might be raised to this proposal is that in the public mind there might arise some doubt as to the importance of this type of membership. If there is any substance to the contention that "junior" would impose upon the public it can be largely met by providing (1) in some detail as to how the term junior shall be used and (2) that before the junior becomes thirty years of age he shall change his grade of membership or withdraw.

From an institute standpoint it seems unfortunate to allow these graduate students to drift away before they are definitely affiliated with the national organization of their profession. Through the accession of these young men just entering the profession seems to be the most logical way for the institute to obtain its growth.

PRESIDENT HENRY H. KENDALL'S ADDRESS

In again coming before you to present an account of our stewardship of your affairs during a year's activities, I am anxious to impress upon you the fact that the officers of the institute are responsible to you, its chapters and members, for what they do and to impress upon you again that what is done is carried out in the belief and intent of obeying your instructions.

May I briefly review the system under which the institute is organized and its affairs managed? In 1913, at the convention in New Orleans, the institute adopted a number of amendments, tending to establish a more democratic form of government.

The convention, made up of duly appointed delegates from the chapters, is the supreme authority.

Its decisions, on matters of general policy and professional principle, are final and are binding upon all its chapters.

As the convention cannot sit continuously, its decrees are committed, between sessions, to the President and the Board of Directors and these in turn are assisted by the Executive Committee and by standing and special committees.

In this way many men are working at all times upon the problems of the profession.

These committees are reinforced and supplemented by the executives and committees of the several chapters, who are practically supreme in their several districts.

In order to secure a reasonable territorial representation we have, by a gentleman's agreement, provided that our directors shall be so elected that there shall be a representative of each region at all times upon the Board. There being nine Directors, there are nine regions or districts, somewhat irregular in area and population, but intended to secure a proportional representation.

The Institute has fifty-one chapters distributed all over the country. These chapters represent widely varying conditions and customs. The problem of a central administration would be almost unsolvable were it required to legislate upon all questions arising in all these differing conditions and localities. Wisely, therefore, the local administration is confined to the chapter and the Executive seeks only a general supervision and guidance. Even this at times seems to some among us to be too paternal and restrictive.

This organization machinery on the one hand and the large field of chapter independence on the other hand, bound closely together by mutual interests, and by representative committee personnels, have made the institute a powerful influence in national

and local affairs. Our standards, our ideals, and our rulings are increasingly recognized and our judgment is deferred to.

With our increased membership we should greatly increase our influence. We are relatively a small group compared to our population, but with a real appreciation of our opportunities and of the real value of our service we may claim and expect to be accorded an influence most potent for good in all public affairs.

Every architect has reason to be proud of the institute and ought to wear with as great a pride as that of any fraternal order the badge of membership. Whatever may be our shortcomings we have enough of achievement to justify our pride.

Believing that a great many of our members concern themselves so little with Institute affairs that the announcement of our activities and decisions comes with a shock to their nervous systems, if it comes at all, I am tempted to rehearse some of the things which have been done during the thirteen months since we last met in convention, in the hope that in this form they may have greater publicity than the more formal reports which will be placed before you by your officers and committees.

Our campaign for membership has continued with gratifying additions to our numbers. One thousand and thirty-two new members in two years and we now have in round numbers two thousand five hundred members. An increasing desire for getting together is shown by the organization of new chapters, eleven in two years, in new territory in some instances, and in other cases in sections where it has been impossible for members to attend chapter meetings at headquarters on account of distance and expense of travel. These new agencies will, I believe, be new centres of activity for promoting fellowship, for upholding professional standards, and developing a comradeship not otherwise possible. We welcome these new bodies to our fellowship and wish for them all prosperity.

An embarrassment arising out of our increased membership is the increased size of our conventions. If the old standard of representation is to prevail, a convention membership of three hundred to four hundred will result, making a somewhat unwieldy body, particularly so, if every one is to be permitted to voice his opinion on all topics presented for discussion.

Especially will this increase bear heavily upon the chapter treasuries, which bear a part at least of the expense of sending delegates to the conventions. The Directors have, therefore, with the assent of the chapters, limited the attendance to this present convention and will suggest a revision of the by-laws reducing for the future the number of delegates which shall be appointed, which will automatically reduce these expenses.

There has been an increasing recognition of the institute by public bodies having to do with the building, artistic, and economic questions of the day. The Department of Commerce has been most generous in recognizing the value of the architects' advice and assistance and has given adequate recognition to members of our profession in forming committees and commissions for the study of economic problems.

Our members serve in these groups at great personal sacrifice, for the honor of the profession, and from the highest motives. We should accord them every recognition and approval.

The association formed two years ago to bring together all classes interested in building, ably directed and fostered by leading men of the profession, and called by them the "Congress of the Building Industry," has gone forward with its work. Local bodies have been formed in our larger cities and frequent conferences are held to study the problems of the industries involved and find a common ground of agreement and promote efficiency in building matters.

Other related services, such as the Small House Corporations, have carried forward their work. New divisions have been organized and are developing plans and service programmes. It should not be forgotten that this is not a scheme for profit and is carefully safeguarded from ever being used in that way. It is to give to those who could not otherwise have it an expert professional service at a cost impossible except by such a combination. It has not appealed to some of our members, who have felt it unwise and will so express themselves to you. This will be a matter for you to decide and I ask from you its thoughtful consideration.

The Board of Jurisdictional Awards has continued its work, and "work" very adequately describes its task during the year. Its decisions in the past have not always commended themselves to some of you. Some have felt that they, in their happy situation of *Veni, vidi, vici*, could not give their adherence to these agreements. How glad I am that you are free from the very troubles that the Jurisdictional Board was constituted to avert. How considerate we wish you would be to those of us who, still under the harrow, are glad of any ruling that will divert the particular prong which menaces us to another direction, or remove it altogether.

In so great a country as ours there are many varying conditions. Not all of us have a Landis, or a united citizen opinion supporting our efforts for fair play and equal opportunity, and what is good in one case may not always prove the best in all others.

I beseech your tolerant, sympathetic patience and assistance.

The institute is continuously asked to join in organizations for altruistic, co-operative, constructive effort and to many of these which promise real service for the country we have given our moral and material support, asking many of our most active and efficient members to attend and give their service and, with regret I confess it, pay their own expenses. This should not be necessary and I hope the Directors will be able to find some way in the near future to meet these really necessary expenses. It is often hard for representatives of other organizations, which give considerable sums to finance these operations, to understand why we cannot do our part as well as they.

The subject of competitions has been, as always, a troublesome one and much time and anxious thought have been given to it. The most serious consideration was given to charges brought against an advisor and the standing committee, by a chapter, which grew out of a permission to waive "essential conditions" so called, and resulted in great dissatisfaction and the simultaneous withdrawal of a number of men who were not satisfied with the verdict. The Directors and the Committee on Competitions gave most serious consideration to the limitation of the authority of the committee; but in view of the tendency of legislatures and other bodies to embody in statute or ordinance conditions which are incompatible with what we call essential conditions, an insistence upon which would prevent public improvements of importance, or result in throwing them into incompetent hands, it seems as if the authority must be continued for the committee to still use its discretion.

The Directors were asked by the last convention to formulate rules for recognizing special ability and service by the conferring of Fellowship upon members of the institute. At first this seemed an easy matter to adjust and suggestions for nominations were invited, to be acted upon by the Jury of Fellows as now constituted.

When, however, the jury approached consideration of its task it soon became convinced that while Fellowship, as a recognition of special service, or fitness, was desirable, the selection of candidates ought to be made by an independent committee, not engrossed with other duties, but free to give careful and deliberate consideration to all claims made and such investigation as might be necessary to thoroughly establish the worth of every nominee. An amendment to the by-laws to establish such a jury will be presented for your approval.

Some years ago a new form of badge indicating membership was adopted, but until the last convention it had never been directed to be made. The Board was directed to prepare it and place it on sale. It is to be had from the executive secretary at the Octagon, and I hope whenever I meet you in future, even if your name or face be unknown to me, to be able to identify you as one of the fraternity and so to be on friendly terms at once without further formality.

During the year our Committee on Foreign Building Co-operation organized an exhibition of American Architecture at the Paris Salon, and it was afterward sent to London at the request of the Royal Institute of British Architects and by special request was retained for some months for exhibition in other cities. The report of the committee will cite the satisfaction and appreciation with which it was everywhere received.

The finances of the institute will be appropriately reviewed in the report of our treasurer, to whom you will soon listen. So quiet and unobtrusive a gentleman is he, that you scarcely realize how important a factor he is in our counsels and activities. Let me tell you, however, that we never, if possible, hold a meeting without him, and that when he disapproves we hesitate twice ere we override his opinion.

A year ago a generous gift of \$25,000 to the institute was announced, the income to be applied to educational purposes. The gift was in fact \$27,000 and the bonds in which it is invested have a market value at last reports of \$28,000. It was the hope of the donor that this fund might be the nucleus of similar gifts which in time would prove a substantial and permanent endowment; the income of which would be a potent factor in the educational work of the institute.

It is my privilege to recommend to you that this fund be now named, in honor of its donor,

THE WAID EDUCATIONAL FUND

and so carried on all our records.

That his hope for additional gifts may soon become a certainty, I commend to your attention.

The central offices of the institute are in the Octagon House. The ownership of this historic building, so intimately connected with the history of our country, was made possible by the generous gifts of architects who realized the desirability of a permanent home for the institute.

The increasing difficulty of finding suitable meeting-places for our convention has prompted the study of possible improvements in the Octagon property and the erection of such buildings thereon as shall provide a carrying income and a suitable place for our meetings and exhibitions. Studies for this development will be presented to the convention and will deserve your consideration.

There are many other activities to which I might as properly call your attention. The work of our Education Committee, the Committees on Public Information, Contracts, Registration Laws, Historic Monuments, War Memorials, Community Planning, Fire Prevention, and others, are all worthy of consideration, and I hope you will give them your attention in due course.

I should fail utterly did I attempt to put into words an adequate expression of the hearty co-operation, the gracious acceptance of committee assignments, and the unswerving loyalty with which you have met and aided my efforts to carry on the presidential office. It has been a revelation of good fellowship, real friendships, and co-operation, such as I did not dream I could evoke and I cannot express my appreciation. To Mr. Parker, who does everything he should, and many things I should, so well and so satisfactorily, that I would far rather he did them than I; to Mr. Kemper, whose unfailing vigilance and accurate mind keep us all posted as to our duties, whose enthusiasm for the institute and loyalty make him so effective an executive, to the Directors and the other officers, who have so thoughtfully assisted me, I owe a never-to-be-paid debt of thanks. It must go on interest; I can never discharge it; and finally, to you all, who have given me two years of great responsibility, but years of privilege and opportunity, I make my grateful acknowledgments.

The Canon of Ethics. Canon 11 of the Canons of Ethics which reads as follows: "To compete knowingly with a fellow architect for employment on the basis of professional charges" was stricken out and to Paragraph 4 of the Circular of Advice, entitled "On the Architect's Charges" a second paragraph was added, to read as follows:

"To compete knowingly with a fellow architect for employment on a basis of professional charges is inconsistent with the spirit of this code. An architect should take reasonable steps to ascertain if other architects are also under consideration, and in no event should he depart from his own or any general standard of charges for the purpose of underbidding some competitor."

FOR THE RESTORATION OF THE OLD FINE ARTS BUILDING

Mr. George W. Maher outlined the plan of the Illinois Chapter of the American Institute of Architects for the restoration of the building:

Perhaps as important an instance of service on the part of the Illinois Chapter, A. I. A., is the effort now being made to save and perpetuate the Fine Arts Building of the World's Columbian Exposition.

This magnificent structure, as you are aware, is the last remaining memorial of this great art achievement. An achievement that undoubtedly stimulated America to a broader interest in art, architecture, city planning, and general beautification. It, therefore, possesses a distinct significance that is of value not only to Chicago but to the nation.

The great international exposition of 1893 also marked in a notable way America's first world-wide association with peoples and nations from abroad. Since then other great events of international significance have occurred, but it may properly be claimed that the first international attempt was successfully achieved at this great World's Columbian Exposition.

The Fine Arts Building was the very heart of this great exposition and has the distinction, in addition to this historic significance, of being one of the most beautiful examples of classic architecture in this country, if not in the world. It is a pure type of design, "Greek in spirit," and has met with universal approval from art critics of note here and abroad.

(Continued on page xxxv)

The Mary Imogene Bassett Hospital, Cooperstown, N. Y.

AT a time when epidemics were prevalent throughout the greater part of the Eastern States, it was found that the capacity of the then existing hospital at Cooperstown was by far inadequate to accommodate one-half the

memorial hospital than that it should finally be lost in a heap of débris.

Old solid pine beams, twelve feet by twelve feet by sixty feet, were found in these mills in perfect preservation, and are now used in some of the barns of Fenimore Farm. It was often quite a picturesque sight to see trucks (which, by the way, were manufactured in near-by towns) hauling this stone from a distance of three and four miles.

The photographs fully show the beautiful nature of the local stone, and particularly of that from the old mills. They seem to have found a naturally flat stone which gives more the texture of brick than that of heavy, cumbersome stonework.

Cooperstown has produced, from one generation to another, men who, from the very love of the work, have become some of the very best journeymen, mechanics, farmers, and men of all trades; and it is for this reason that this entire group of buildings was completed through the efforts of Cooperstown men. The stonework was laid by masons who had been trained from boyhood to lay just this kind and quality of stone; carpenters who had been trained to build the beautiful Colonial examples which abound throughout this section; plumbers and electricians who understood everything in their line from public water-works to wiring for communities. Of course there were many things for which the labor had to be imported, such as composition floors, linoleum floors, tile and marble wainscoting, and some of the plumbing; but, outside of these, the entire result has been accomplished by men in this community which is tucked away from the general line of travel and which has preserved its unique charm up to the present date.

The main hospital with its wings was planned to accommodate seventy-five persons. The main or central building containing the administration, private patients' rooms, operating-rooms, recovery-room, doctors' and interns' rooms, is located between two wings, each separated from the central building by solariums and fresh-air cut-offs. These cut-offs are cross corridors ventilated by transoms over the



The Old Mills at Index (near Cooperstown).

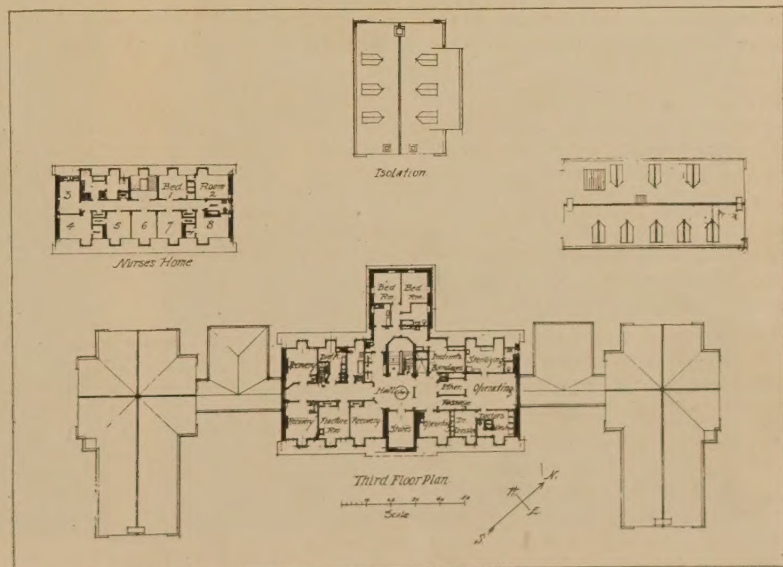
contagious cases. The excess number had to be cared for in near-by houses.

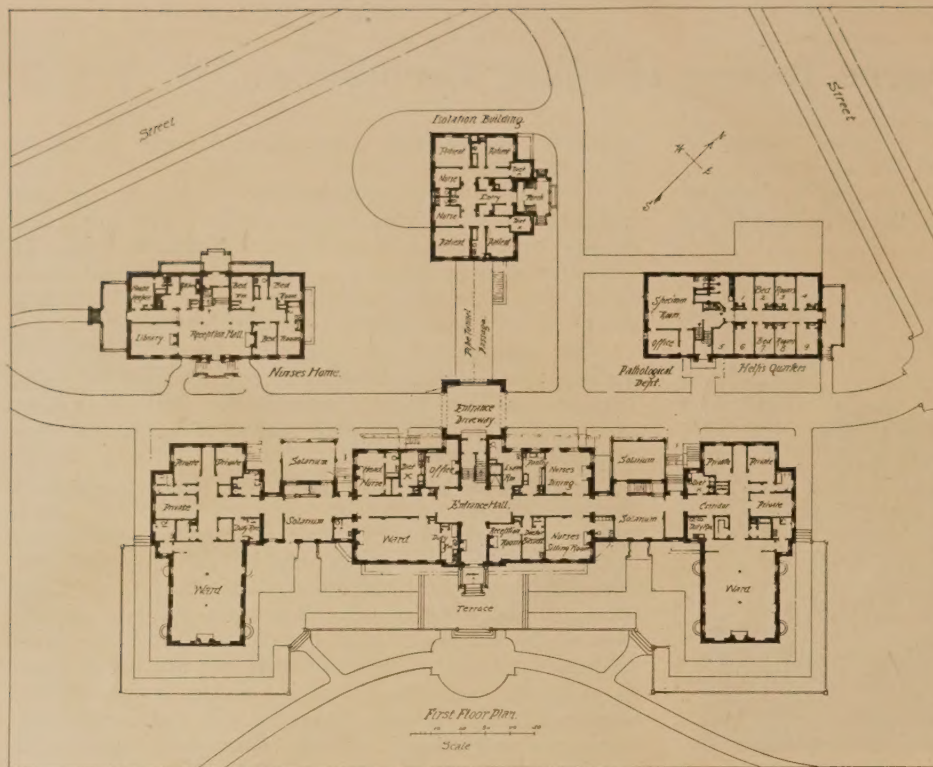
Realizing this condition, Mr. Edward S. Clark decided to build an Isolation Pavilion adjacent to the present hospital. A sketch was made of this idea and the location of the same arranged in such a way that it would be one unit of a future scheme for the whole. This idea grew to such proportions that it was finally decided to build an entire new hospital which would accommodate the needs of probably the entire community.

The old ball-field of Cooperstown was purchased for the site, it being a sufficient distance from the village to satisfy all the demands of open air and beautiful surrounding country. Cooperstown having been the original home of baseball, this field was given up with great reluctance—but, realizing that it was for the good of the community, another site has since been given to this great American sport.

The donor of this hospital has been very generous in going to extra expense to preserve in its outward appearance that feeling of Colonial architecture which prevails in Cooperstown and the surrounding country; and for this reason the native building stone was chosen as keeping the character of some of the best buildings in the town. The architect, Mr. Frank P. Whiting, has employed the tradition of the country in his design.

It would have been quite an undertaking to quarry all the stone for such a piece of work, so one or two old mills which were landmarks at Index were purchased, particularly for the stone. These buildings were going to decay very rapidly, and it was very much better to have the stone embodied in this





windows, so that persons passing through the main buildings to the wings must necessarily come into different air from that contained in any other section of the building.

There is no artificial ventilation throughout the entire hospital; all wards and private rooms have fireplaces.

The east wing has two wards for men and private rooms, diet kitchens, duty rooms, and accessories.

The west wing contains one women's ward, with private rooms, diet kitchens, duty rooms, etc.

The second floor is given up entirely to obstetric cases, the same having a separate operating-room, utility-room, two recovery-rooms, babies' room, and a ward for six patients.

The main hospital group is composed principally of three buildings, each of which may be operated separately with its own dependencies. These buildings are all of fire-proof construction, with the exception of the doors and windows; but the corridor doors are all double-acting fireproof, so that patients would always have access in case of fire to staircases in back of the solariums.

Directly in back of the Administration Building and at a level between the first and second floors is a good-sized lecture-room, under which is a covered entrance for patients and visitors.

In the basement of this group there is a complete X-ray department with the most modern apparatus, a therapeutic department, kitchens with their dependencies, and dining-rooms for doctors and nurses.

The rather isolated position of Coopers-town away from the railroad centre made it necessary to plan a nurses' home and help's quarters in connection with the institution,

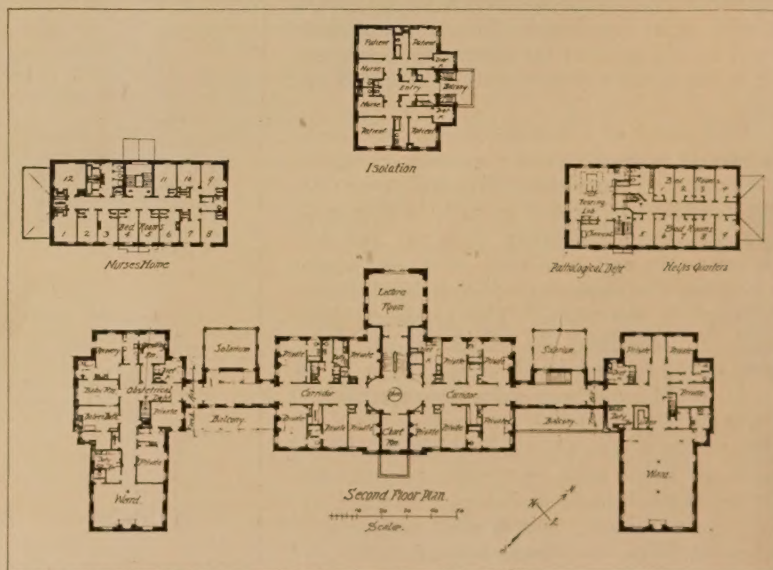
and a separate building for isolation cases provided to take the place of that projected near the old hospital.

The nurses' home will accommodate twenty-five nurses and includes reception-hall, library, housekeeper, kitchen, gymnasium, and sun-porches. In fact, this little building is almost a complete home, each room having an unobstructed view down the Susquehanna River Valley.

The Pathological Building is an exact complement of the nurses' home in size, but the western portion, which is entirely cut off from the help's quarters, contains a complete pathological and research department. In the basement there is a complete laundry equipped with all the apparatus for hospital work, and next to this—on the same floor—is a sterilizing department, where all linens are sterilized before entering the laundry.

On the first, second, and third floors, and that portion of the building not occupied by the pathological department, there are rooms for the accommodation of men and women help, to the number of twenty-five.

Centrally located some distance back of the tower is the Isolation Building. This contains all the heating apparatus for the group, sterilizing steam, electric switch-board, vacuum-pumps, high-pressure boilers which operate the vacuum system that heats the entire group of buildings at seventy degrees in the most severe of Cooperstown weather—which sometimes goes to thirty degrees below zero. The upper floors of the Isolation Building are sufficient to accommodate twenty-five patients, and a unique arrangement of each floor was necessary to accomplish three things:





SOLARIUM.



ENTRANCE-HALL.



STAIRCASE TO LECTURE-HALL.

INTERIORS, THE MARY IMOGENE BASSETT HOSPITAL, COOPERSTOWN, N. Y.
 Frank P. Whiting, Architect. Interior Furnishing, Louise Rennie.



Operating-room.

first, that the attendant nurse should have her own room and bath; second, that a person entering the apartment should leave his clothes and enter, returning by a separate entrance into the outside air; third, each apartment to have its own diet-kitchen, bathroom, and sterilizing apparatus.

The stairways are entirely outside of the building, so that there is no interior communication from one floor to another.

The buildings have been furnished throughout under the direction of Louise Rennie. The furnishings are simple and in keeping with the general soft tones used in the treatment of walls and floor coverings.

In presenting an unoccupied group of buildings of this

nature, it is difficult to impart the sympathetic sense that attaches to any work where the noble qualities of mercy and tenderness are called into being. But in seeing this Cooperstown Hospital one already feels the generous emotions that will be called forth by its occupancy—and the busy movement and life within its walls.

It is gratifying to remark that in some recent hospital buildings much beauty and interest has been added to the interiors by a wise use of some form of color decoration, and it has proved a source of cheer to many of the inmates, both of the staff and the patients, some of whom are still apt to approach a hospital with a sense of fear and dread of the horrible, although this is very quickly dispelled after entry. There is no doubt that the skilful use and choice of colorful decoration in certain places is an asset.

The accompanying picture is quite a contrast between the town of 1862 before the fire and the present thriving community where there is to-day one of the most complete and comfortable hotels, with two hundred rooms; where they have one of the finest libraries, village clubs, gymnasiums, a lake nine miles long that offers wonderful advantages for both winter and summer sports. We presume that James



Fenimore Cooper was often a visitor at the Eagle Hotel shown on the cut; and one will find some very interesting reading in the history of this quaint old town which was made famous by the author of "The Leatherstocking Tales" and "The Last of the Mohicans."

Haphazard Construction of Homes

A PROMINENT Ohio citizen was not especially enthusiastic about a building ordinance for his city, reports one of the field men of the National Lumber Manufacturers Association, until he inspected recently the construction of thirty-two houses out of a total of forty-two now under erection in the town. The local dealer who is erecting these houses has violated nearly every possible law of good building. The foundations to grade are concrete poured dry and are cracked. From grade to sill cement blocks are set together without even a pretense of mortar in joints. He fills the joints inside and out after the building is up. The posts in the basement are misplaced. The spiked bearing member in his floor was in the way of a furnace pipe, so he cut into the member and laid a short run pipe against the bearing member without any insulation. If the register above

is shut off with a hot fire going and possibly children sleeping in the house, it would not take an expert to forecast the probable result. If a joist interfered with placing a register box, he would cut out the joist and use two-by-four headers spiked in. The woodwork was spiked to the flue—this alone being sufficient to condemn the structure so far as fire safety is concerned.

Even a novice in building laws can see the fire hazard in such houses, and the urgent need of city building regulations which would not permit such careless construction. And yet if such a dwelling should be burned, many would thoughtlessly lay the old-time blame upon frame construction or shingle roofs, whereas the fault should be absolutely credited to the violation of almost every law of building known to the profession.



Editorial and Other Comment

The Human Aspects of the Institute Convention at Chicago

WE are all of us more or less apt to shut ourselves up in our little narrow ways of life and to stick pretty close to the environment with which we are familiar and accustomed. It is only when we break loose and get out into the world that we discover how much we miss and how very human all the world can be if we will only give it a chance.

If the convention of the American Institute of Architects meant no more than bringing its members together to shake hands and look into each other's faces, it would be accomplishing much.

The Chicago convention seemed exceptionally happy in regard to the more intimate fraternizing of all concerned or interested. Mr. N. Max Dunning's comments in *The Bulletin of the Illinois Society of Architects*, published in May in anticipation of the convention, most happily expressed the feeling that pervaded the sessions and it is this impression that every one carried away with him.

"We think of many architects only as abstract names, as symbols of great achievements, and we conjure up in our minds pictures of austere—exclusive—awe-inspiring men. At conventions we meet these men and we find them to be unpretentious, lovable flesh-and-blood individuals who are struggling with the same problems we are trying to solve, and who are just as anxious to know us and get our point of view as we are anxious to know them. Through these meetings, we make acquaintances, cement friendships and gain a new enthusiasm for our work and a new love and respect for our profession that helps to smooth out some of the hills we all have to climb and that transcends in importance what we may have gained in technical knowledge important though this knowledge may be."

No one could look over the faces of the men assembled in the convention hall or at the informal midday luncheons and not be impressed with the fact that here was a body of men that stood for something besides facts.

How much these men brought and how much they took away in new impressions of individuals and of what the architects of the country really represent.

Of course, architecture is a business as well as an art, but we believe that at bottom there is not an architect who would deny that the thing we call art is the inspiration and background even of his business. He wants to build beauty into his work though too often his client denies him this privilege.

As Mr. Dunning said, the big men, the men whose names we reverence and look up to as great leaders are not posing on any pedestals with barbed wire around them. As a matter of fact, it is the big men in the world everywhere who can afford to be simple, because they know by hard

struggle the problems that confront every one who aspires to be something beyond a mere cog in the wheel of the world's materialistic machine, and well indeed such men know the shortness of time for achievement. We are one of those who believe the architect's work should be as widely known as the work of the sculptor and painter. His is the handwriting on the wall for all to see and read, and he, more than any one else, is in a position to carry the message of beauty, fitness, and good taste to the man on the street.

We were interested especially in noting at the convention an unusual number of professors from the various architectural schools.

\$100,000 in Prizes

PRESIDENT KENDALL announced at the dinner given to the American Institute in the old Fine Arts Building, Chicago, the Chicago *Tribune* offer of prizes amounting to one hundred thousand dollars.

Their purpose is manifold:

1. The erection of a structure of enduring beauty which shall be at once a glory to journalism and to the city, and a model of practicality. *The Tribune* seeks, in short, artistic nobility and business effectiveness.

2. The providing of new quarters for the rapidly extending demands of a newspaper which, though it looks back this morning on seventy-five fruitful years, lives in an unparalleled present.

3. The offering of financial encouragement so emphatic and so prompt that it will give fresh impetus to the great cause of commercial architecture in America. Whether this encouragement will discover and develop new talent, or give added recognition to men whose fame is already established, the result of this competition will show.

4. The addition to the assured architectural splendors of the new North Michigan boulevard of a building which will give the tone and tendency to a thoroughfare that soon will be the most impressive street in the western world.

Certainly a generous and appealing offer. The prizes are as follows: One of \$50,000 for the design selected by the jury, one of \$20,000 for the design ranking second, \$10,000 for the third design, and ten prizes of \$2,000 each to be awarded to architects especially invited to enter this project.

In connection with the offer we can't help remarking the general indifference of the Chicago papers to the proceedings of the convention of the Institute. We looked in vain, even in *The Tribune*, for any adequate comment and we were not alone in wondering why this was so.

No one who visits Chicago's splendid Art Institute and learns something of the great work it is doing can say that Chicago is lacking in appreciation of the arts. Has it not been well said that architecture is the mother of them all?

The Lincoln Memorial

THE recent dedication of the impressive and nobly designed Lincoln Memorial at Washington, emphasized with consummate good taste and a fervent spirit of quiet and dignified patriotism, especially in President Harding's words, the things that express our nation's being and growth.

In the beautiful simplicity and yet grandeur of the memorial are embodied the very characteristics of the man whose image in stone the sculptor, Daniel Chester French, has seated in his temple.

We owe a debt of gratitude to the men who placed the building of this majestic structure in the hands of so able and competent an architect as Mr. Henry Bacon. He brought to his task a great love and reverence for the man Lincoln, and he was wise in his choice of his collaborators, Mr. French and Mr. Guérin.

And it was a happy thought to invite Mr. Royal Cortissoz to write the inscriptions that are chiselled in the wall behind and above the statue.

IN THIS TEMPLE
AS IN THE HEARTS OF THE PEOPLE
FOR WHOM HE SAVED THE UNION
THE MEMORY OF ABRAHAM LINCOLN
IS ENSHRINED FOREVER

Speaking of his conception of the memorial, Mr. Bacon has said:

"From the beginning of my study I believed that this memorial of Abraham Lincoln should be composed of four features: a statue of the man, a memorial of his Gettysburg speech, a memorial of his Second Inaugural address, and a symbol of the Union of the United States, which he stated it was his paramount object to save and which he did save. Each feature is related to the others by means of its design and position, and each is so arranged that it becomes an integral part of the whole in order to attain a unity and simplicity in the appearance of the monument.

"The most important object is the statue of Lincoln, in which is expressed as far as possible the gentleness, power, and intelligence of the man."

But it is not the figure alone that dominates, though it is the living, vital element of the whole majestic conception. Beautiful symmetry, perfectly co-ordinated proportions of the masses and of details make this tribute to our most beloved national hero one of the noblest monuments of the world.

How quickly we forget, though, in the finished achievement the years of thought, the concentrated energies, the thousand difficulties, the misgivings, the possible fear of failure that perhaps beset the creator of such a monument.

It was a stupendous responsibility, and how splendidly it has been met by Mr. Bacon and his associates.

In these latter days when chaos seems to have come back to most of the world, when our own country never more needed the wise and tolerant deliberation, infinite patience and human sympathy, that the memory and face of Lincoln so touchingly express, this memorial will be a thrilling if silent testimony to the longing of our hearts.

May it bring to the minds of the thousands who will see it the thought that we must all live more than ever in the faith and charity of Lincoln, in the faith, serene hope, and strength of that other, who lies at Mount Vernon.

The following resolution was read by Electus D. Litchfield and adopted by the convention of the American Institute of Architects at Chicago:

Resolved that, Nothing that we can do here will add to the fame and glory of Henry Bacon; he is already with the immortals. Modest and unassuming as he is, the great monument which he has built for us to the memory of Abraham Lincoln has written his name large at the foot of the Mall Plan—that great Honor Roll of American Architects—there it will be remembered with the names of L'Enfant, Burnham, and McKim—whatever we here may say and do—safe in the affectionate keeping of the people. Those who have seen the Lincoln Memorial know well that this is true; to those who have not, we may well say that truly under the Providence of God have Bacon and French and Guérin built a memorial—a shrine—worthy of that greatest American and of the place that his character holds in the hearts of the American people.

The American Institute of Architects cannot add to the glory which is Bacon's, but it will honor itself in honoring him. We may well be proud and happy to-day in this his great achievement. Consider how great would be our shame and unhappiness had he not measured up to his great task. But to-day we may repeat with reverence the words in Genesis: "And God saw that it was all very good."

And it is, indeed, right and decorous that the Institute in convention assembled honor him. We may not add to his glory—but much to his happiness. Sweet, indeed, is the heart-felt praise of one's fellow architects who know as no one else can the struggles, the disappointments; but for this very reason they can appreciate, as others cannot, the infinite pains incident to a great success. Let us, therefore, with love and with gratitude make to Henry Bacon this our highest award, as a token of our appreciation of his great achievement.

Book Reviews

THE MODERN COUNTRY HOUSE IN THE NETHERLANDS. By J. H. W. LELIMAN and K. SLUYTERMAN. With Many Illustrations, Including Elevations and Plans of Typical Houses. Published by Martinus Nijhoff, The Hague, Holland.

The text of this book is in Dutch.

Our readers who know Holland will find here many familiar high-peaked roofs of tile, the houses mostly of brick; and while there is a certain picturesque effect in many of the houses shown, the impression one gets is that there are few restful spaces left in the façades, and too many openings and broken lines. The thatched-roof effect is naturally a popular one where real thatched roofs are much in evidence. Some of our readers will recall those in the little town of Laren, beloved by many American painters, but thatched roofs lose their charm when broken up with queer-shaped gables and aggressively ornamented dormer-windows.

Among the smaller houses are a number that are quite charming in their simplicity and quaintness.

HISTORIC HOUSES OF SOUTH AFRICA. By DOROTHEA FAIRBRIDGE. With a Preface by General J. C. Smuts. With many illustrations, including a number of full pages in color.

No doubt the historical and personal part of the text of this handsome book will have interest for South Africans, for many of the English and old Dutch families associated with the settlement of the country. It should have an interest, as well, for every one who likes to follow the effects of transplanting an old artistic tradition to a new country. There is much to remind one of the architecture of old Dutch homesteads, and also familiar features of many famous English houses.

There is special charm in the farm groups shown, and architects will find interest in the pages of drawings of architectural details and furniture.

There are chapters on Old Dutch Furniture and the Decorative Arts, with many attractive illustrations.

DESCRIPTIVE GEOMETRY. By GEORGE YOUNG, JR., Professor of Architecture, Cornell University, and HUBERT EUGENE BAXTER, Assistant Professor of Architecture, Cornell University. The Macmillan Co., New York.

Both the text and many drawings in this admirable book should make it a welcome addition to the draftsman's and student's library, and a valued text-book for schools and the colleges of architecture.



CORRIDOR CONNECTING NEW HOSPITAL WITH PRESENT BUILDING.

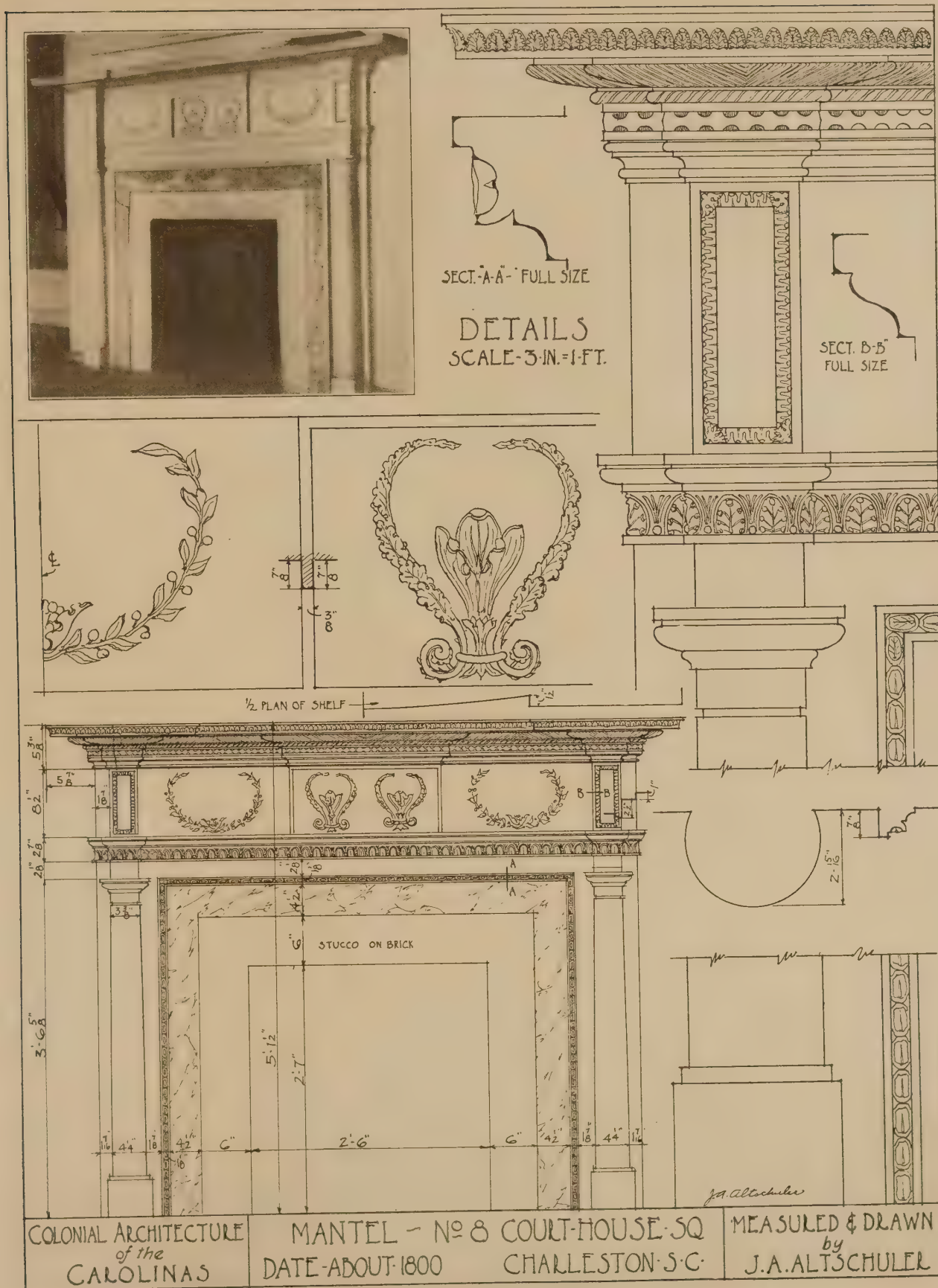
CADET HOSPITAL, UNITED STATES MILITARY ACADEMY, WEST POINT, N. Y.



CADET HOSPITAL
WEST POINT -- NORTH-EAST CORNER

Arnold W. Brunner
Architect.

UNITED STATES MILITARY ACADEMY, WEST POINT, N. Y.



JULY, 1922.



THE MARY IMOGENE BASSETT HOSPITAL, COOPERSTOWN, N. Y.

Frank P. Whiting, Architect.



ENTRANCE TO ADMINISTRATION BUILDING.

THE MARY IMOGENE BASSETT HOSPITAL, COOPERSTOWN, N. Y.

Frank P. Whiting, Architect.



SOLARIUM AND BALCONY WITH RAMP TO TERRACE.

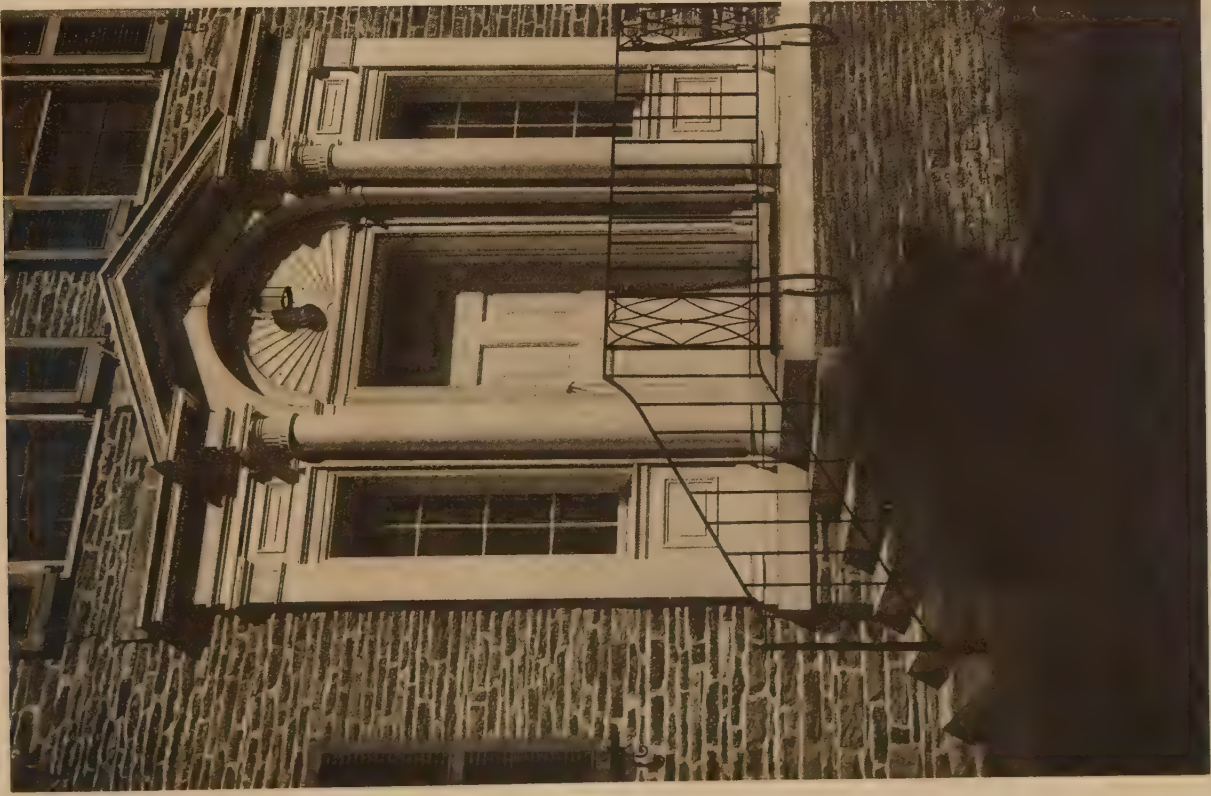


ENTRANCE DRIVEWAY AND COURT BETWEEN BUILDINGS OF GROUP.

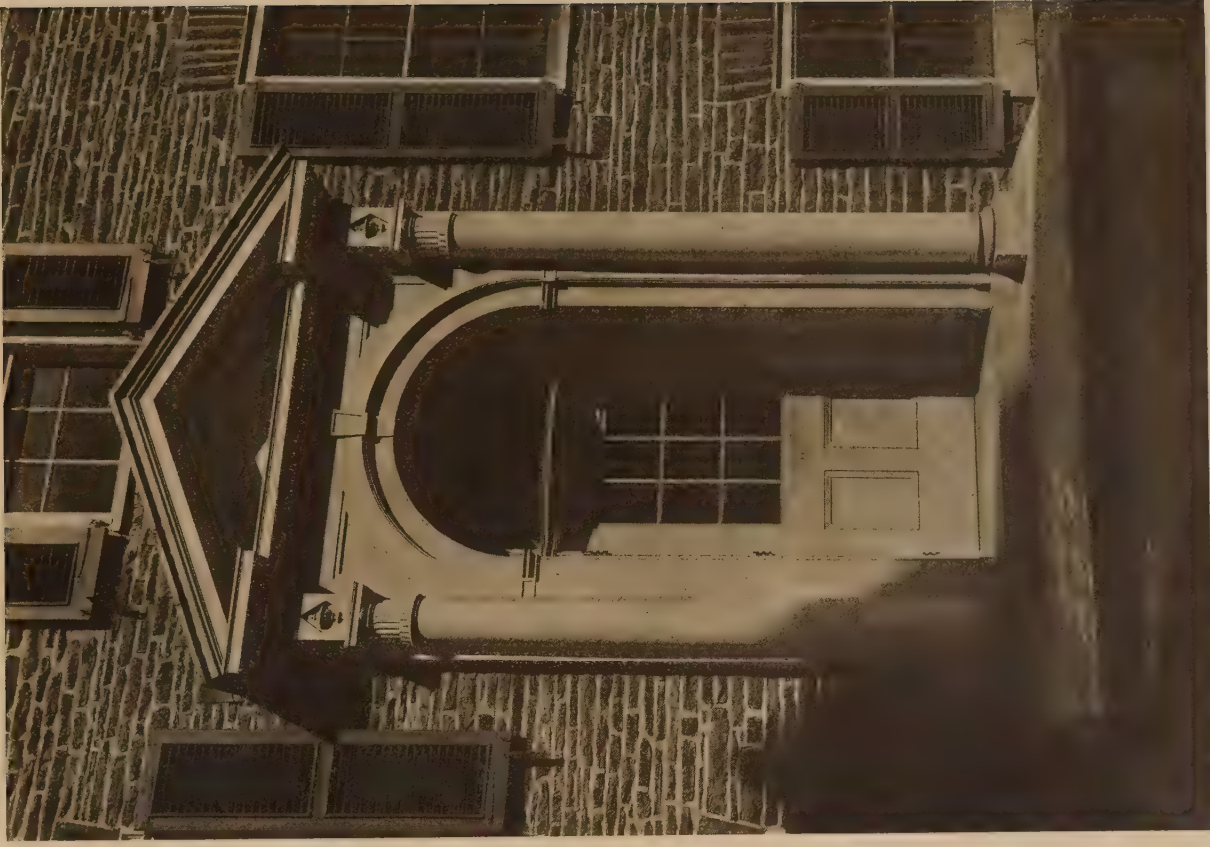
THE MARY IMOGENE BASSETT HOSPITAL, COOPERSTOWN, N. Y.

Frank P. Whiting, Architect.

JULY, 1922.



ENTRANCE TO NURSES' HOME.



ENTRANCE TO PATHOLOGICAL DEPARTMENT.

Frank P. Whiting, Architect.

THE MARY IMOGENE BASSETT HOSPITAL, COOPERSTOWN, N. Y.



RESIDENCE, HAROLD I. PRATT, PARK AVENUE, NEW YORK.

In this house, though the forms are traditional Georgian, the working out of them is individual and modern. dolphins, takes the place of the usual bed mould and modillions.

Delano & Aldrich, Architects.

JULY, 1922.



VESTIBULE.

RESIDENCE, HAROLD I. PRATT, PARK AVENUE, NEW YORK.

The details of interiors demonstrate a thorough knowledge and sympathy with the crafts, which characterize the work of this firm.



UPPER HALL.

Delano & Aldrich, Architects.



DINING ROOM.



LIBRARY.

RESIDENCE, HAROLD I. PRATT, PARK AVENUE, NEW YORK.

Delano & Aldrich, Architects.



DOOR IN BIG ROOM LEADING TO HALL AND LIBRARY BEYOND.

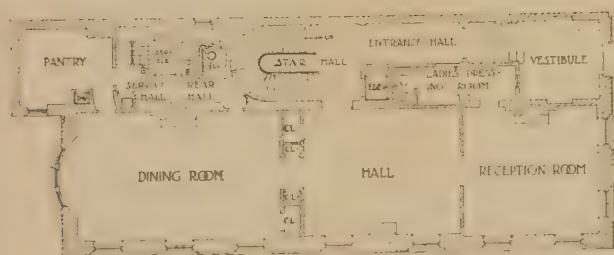
Delano & Aldrich, Architects.

RESIDENCE, HAROLD I. PRATT, PARK AVENUE, NEW YORK.

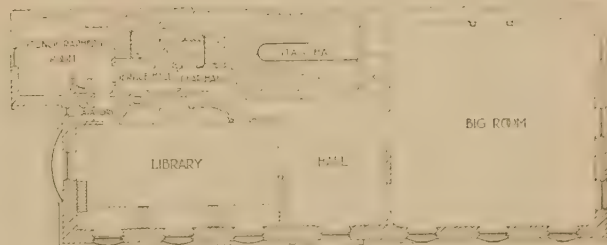
This room is panelled in deal.



BIG ROOM.



GROUND FLOOR



PLAN OF FIRST FLOOR

PLANS.

Delano & Aldrich, Architects.

RESIDENCE, HAROLD I. PRATT, PARK AVENUE, NEW YORK.

In the interior a freshness of detail animates the traditional forms in such features, for instance, as the electric-light fixtures, all of which were especially designed by the architects and made under their direction.



HOUSE, HARRY F. WEBER, MT. VERNON, N. Y.

S. A. Guttenberg, Architect.



HOUSE, HARRY F. WEBER, MT. VERNON, N. Y.

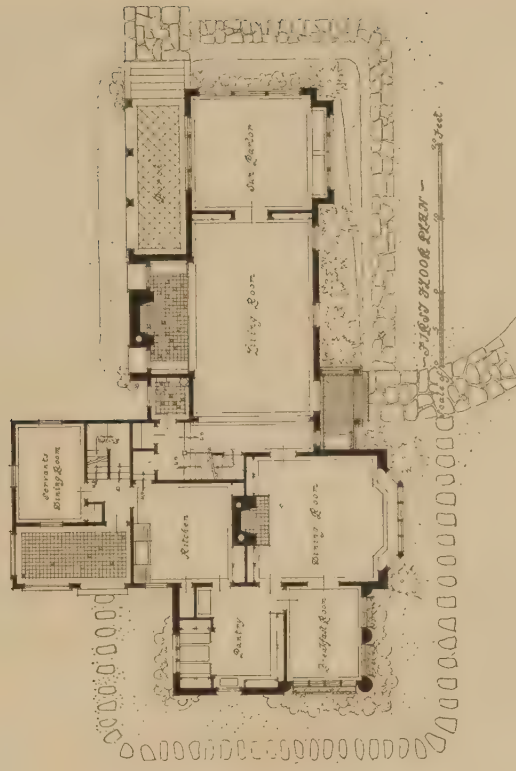


S. A. GUTTENBERG, Architect.

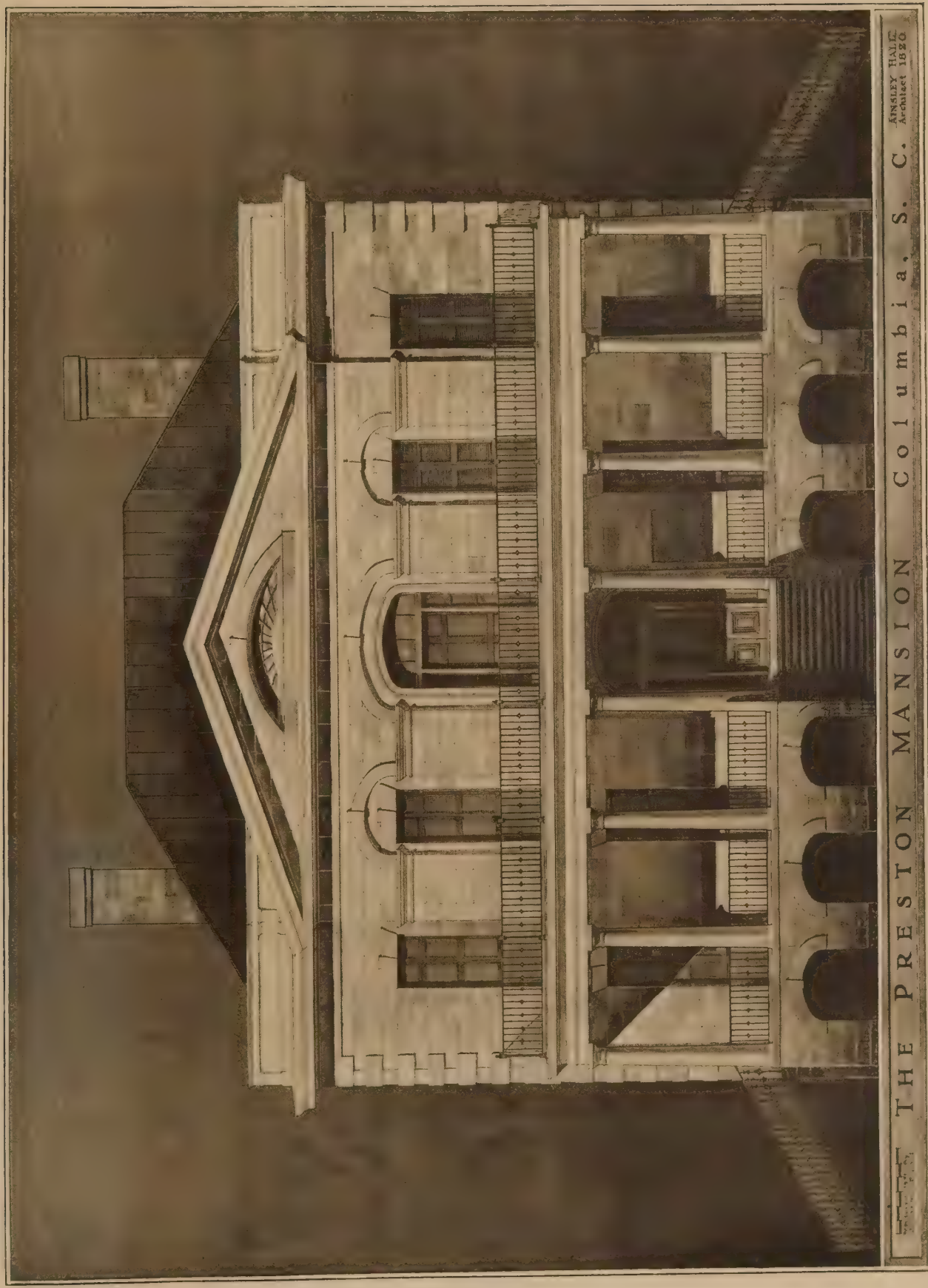
JULY, 1922.



WEDGWOOD'S
Scale of Feet



S. A. Guttenberg, Architect.





MAIN DISPLAY-ROOM, SHOWING TREATMENT OF DISPLAY-CASES.
Alfred Freeman, Architect.



VIEW THROUGH ENTRANCE-HALL INTO MAIN DISPLAY-ROOM.

SALESROOMS OF HESS, GOLDSMITH & CO., 36 EAST 31st STREET, NEW YORK.



MR. HARRY GOLDSMITH'S PRIVATE OFFICE.



MR. JAMES GOLDSMITH'S PRIVATE OFFICE.



PRIVATE SALESROOM.



BOARD ROOM.

SALESROOMS OF HESS, GOLDSMITH & CO., 36 EAST 31ST STREET, NEW YORK

Alfred Freeman, Architect.

Construction of the Small House

By *H. Vandervoort Walsh*

Instructor, Architectural School, Columbia University

ARTICLE XIX

CLASSIFICATION AND CONSTRUCTION OF THE ARCHITECTURAL MOTIFS USED IN SMALL-HOUSE DESIGNING

THERE are not many architectural motifs that can be used in designing the small house, and the ones which are employed over and over again are fundamentally a part of the construction. The plan must build up into block forms, because of the requirements of construction, and the designer has only a handful of shapes that make good roofs, for the same reason. The varieties of dormer windows that he can put on the roof are limited to a few that are capable of being reasonably constructed. He cannot be original in the forms he selects, for they have all been thought out before. He should know them as he does the alphabet and build with them as he builds words with letters.

For example, take the plan of the small house. Can there be much room for originality here? Usually there are at the most four rooms which must be arranged on the ground floor of the small house: the living-room, dining-room, kitchen, and pantry. On the second floor are generally placed the bedrooms. Does it not seem reasonable to assume that all of the best combinations of so few rooms must be quite limited in number, and that the chances are that they have already been thought out? Many a young designer has labored enthusiastically upon what he believes is his original layout for a small house only to find later that his solution has been already worked out and perhaps a trifle better. When an inventor tackles any particular problem, his first step, if he is wise, is to consult the patents which have previously been issued along this line, and then he will know what has been done.

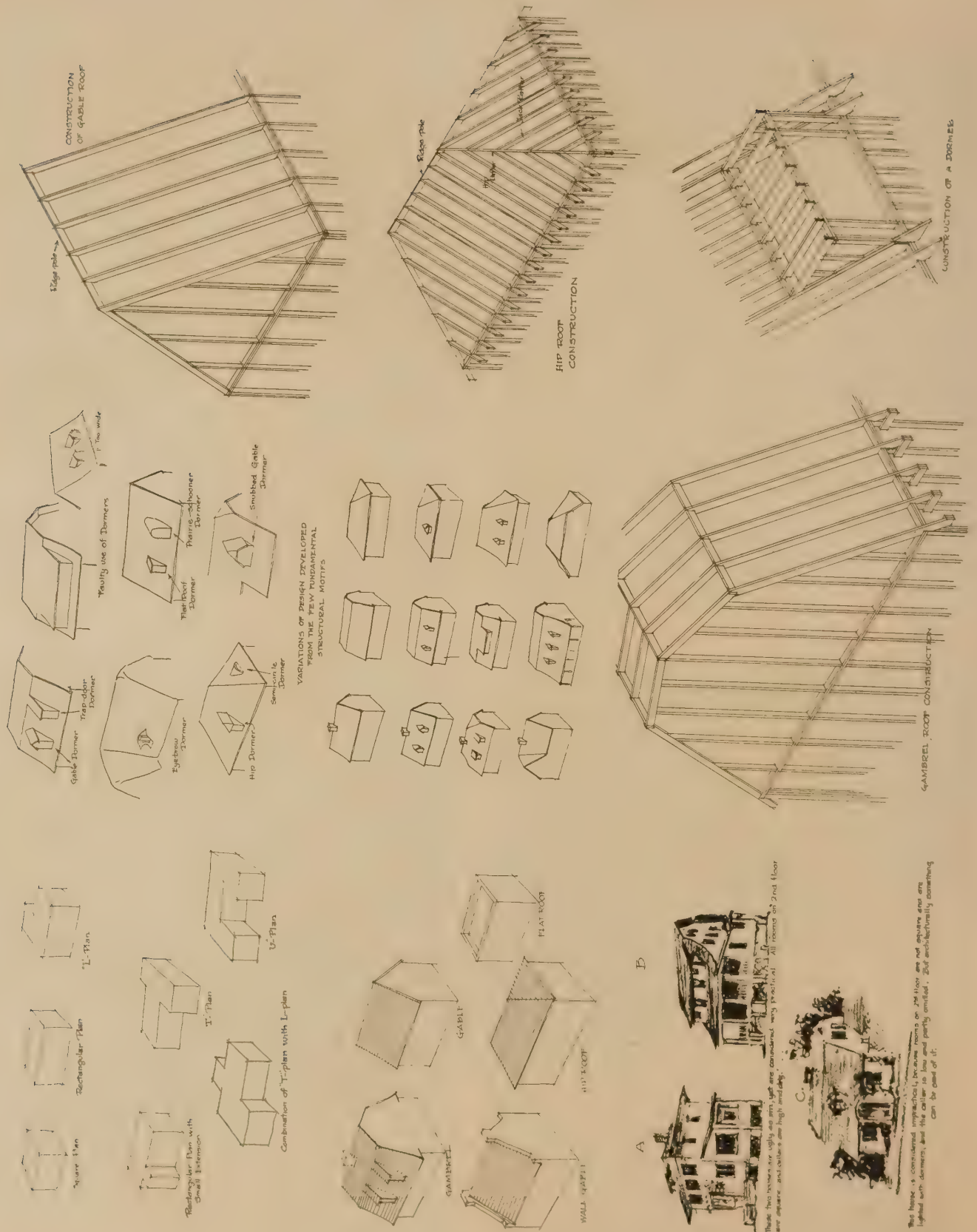
Try as hard as he will, no designer can get away from the fact that the cheapest arrangement of rooms in his small-house plan makes a square unit and builds a square block-house, but that such a plan is one of the most difficult forms to make pleasing to the eye. For this reason the room arrangement which gives a rectangular-shaped house is more often adopted. But we often tire of too much repetition of the rectangular house, and designers try to vary it a little. There is not much leeway here, however. By adding a wing at right angles to the main rectangle of the house, we can have an L-shaped plan which is easier to give architectural variety to, but very uneconomical, for the number of linear feet of exterior wall for a house of this shape is just as great as that for a house which is a rectangle in plan, as long as the L and as wide. This also holds true of the U-shaped plan and the T-shaped plan and the combination of the T and the L shaped plan. In fact, as soon as the designer tries to get away from the simplest rectangular shapes in the small house, the economic reins pull him back, and he must go slow in selecting too picturesque plans. Limited therefore in his possible scope, the real work of the designer should be one of perfecting the acceptable solutions which have been already worked out. Only once in a generation are absolutely new arrangements stumbled on.

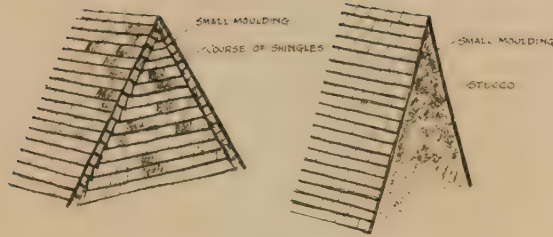
On top of these various-shaped blocks, which these

plans will form, a roof must be erected. Here again, one would think that the architectural motifs would be quite varied, and yet when the matter is studied it is not the case. There are only five fundamental shapes of roofs which can be placed upon these blocks, and two of these types are really the same, and another ought not to be employed, so that, after all, there are actually only three fundamental roof motifs to use. These are the gable roof, the gambrel roof, and the hip roof. The wall-gable roof is merely a type of end treatment for the gable roof, and the flat roof is not suited to the average small house in the country or suburbs, because of traditions.

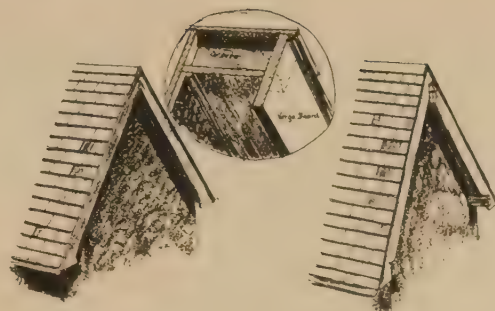
In the small house the designer has the choice of either placing these roofs above the second floor or placing the second floor within the roof. Where the former is selected he sets for himself a very difficult architectural problem—that of trying to make the proportions of a house limited in ground area fit under a roof placed too high. This has rarely been solved with any satisfaction, for in nearly all cases the house looks too high and stilted. The comparative drawings show how true this is. Notice how house *A* and *B* look stilted, while house *C* has a charm which no manner of designing would ever add to the former. Is it not a fact to be reckoned with that the small house is best solved architecturally if the second floor is placed within the roof? Economy of material is certainly secured in this way, and the construction is greatly simplified. The chief difficulties are to properly ventilate these rooms under the roof, and to give them good lighting without making too many and too large dormers. This is a hard problem, but it has been solved successfully. The Dutch gambrel roof was developed for this purpose, and there has been no doubt as to its beauty, except when wrongly used by placing it above the second story or poking the second floor through it in one long single dormer.

It is quite evident from the above how important the roof designing is in the small house. It goes without saying that the simplest arrangement of roofs is the cheapest to build and the easiest to maintain. Every valley means a leak at some later date, for as careful as may be the builder, the history of roof valleys shows that they leak sooner or later. The designer cannot freely mix his roofs either. Gambrel roofs, hip roofs, and gabled roofs do not go together harmoniously, without considerable study, and as a general rule they should not be required to do so. The usual methods of construction of these types of roofs are indicated well enough in the drawings and need no explanation. The ridge-poles in all cases are not of any structural importance, but act as alignments for rafters. For this reason they are made only an inch thick. Hip rafters have much the same function in hip roofs. Whenever valley rafters are needed, these must be designed like floor girders. If dormers are built into the roof, it is customary to double the rafters around the openings. Where gable dormers are constructed, one

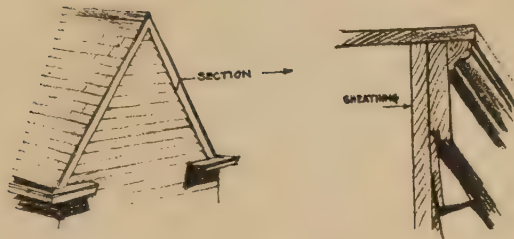




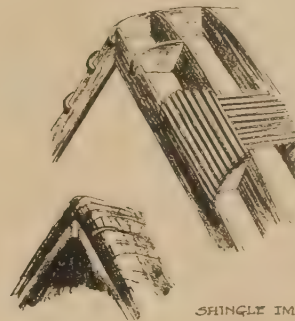
FLAT TREATMENT OF GABLE END



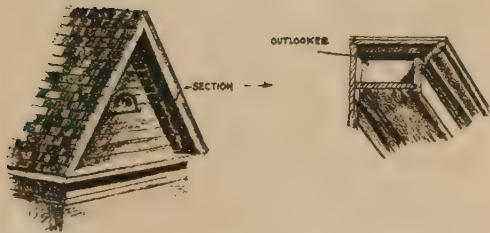
VERGE BOARD TREATMENT OF GABLE END



FLAT TREATMENT OF GABLE END



SHINGLE IMITATING GABLE END OF THATCHED ROOF



ADAPTATION OF CLASSIC PEDIMENT



WALL GABLE

of the valley rafters must be extended to the ridge-pole, or else the rafters will collapse.

Even when it comes to the design of dormer-windows, the limits of originality are quite restricted. The drawings show all of the possible types that have been used with any success. Variations in the proportions and the details of these motifs is about all that the designer can hope for, and yet this is one of the hardest problems to solve. The correct designing of dormer-windows is a very rare thing to be seen. How many houses of modern Colonial style have ugly dormers. They are usually made too large and too wide and fat. The dormer-windows used in the old Colonial houses were narrow and high, and in those proportions were their charming appeals. To-day a double-hung window with weight-boxes is used in these dormers, and the whole width made too wide because of these additions to the sides. This is a warning that the designer should be careful in adopting old motifs to modern requirements. This particular problem has been correctly solved with the use of the weight-box, but how many times it has not been solved is evident on all sides. Another unfortunate use of the dormer-window motif

is the extension of the second floor up through the lower slope of the gambrel roof. This cuts away any legitimate lower section of the gambrel roof, and in order to preserve it, the designer projects it outward from the ends of the house, and has it skirt by the side of the second floor like an added toboggan-slide with no earthly reason for its existence. Then, too, the prairie-schooner dormer, the semicircle one, and the eyebrow dormer are certainly types to be used with great care, for they can become eyesores without effort, and they cost a good deal to construct. Where the dormer is to be made inconspicuous the flat-roof type has been successfully employed, but the roofing material on it should be tin or copper. In some of the trap-door types of dormers where the pitch is very slight, the roofing material ought to be of sheet metal. The sides of dormers are made less conspicuous by covering them with the same material as used on the roof, but this is not always desirable. However, all vertical joints of dormers with the roof should be carefully flashed to prevent leaks.

The treatment of the gable ends of dormers is practically the same as that required for the treatment of the

gable ends of the main roof. Here again, although on the face of it there seem to be innumerable ways of treating the gable ends of roofs, yet there are comparatively few methods. The drawings show about all the possible ways, and any types which appear to differ from these can be shown to be merely variations. The simplest method of treatment is to place a small moulding under the ends of the shingles. A variation of this can be made by adding a wide board below the moulding or a course of shingles running parallel with the edge. The classic cornice can be used, but great taste is needed in handling this motif, for any pitch which is not of the traditional classic pediment form is apt to look badly. The verge-board motif comes from half-timber traditions, and is generally used in a very careless fashion. In general, it usually looks best when some visible means of support is made a part of the design.

The shingle imitation of the thatched-roof gable is one of those amusing architectural fads which do not have very deep roots, and sooner or later are forgotten.

The wall-gable treatment is very dignified, but is usually associated with larger houses, but when simplified it has a charm which none of the other motifs can offer.

Other than these few, there are no common motifs to use in adorning the gable end of a roof. This with the previous statements only go to prove that the originality of design in the small house is limited within a narrow scope, and that the real beauty is not obtained in trying to find different forms, but in trying to use the traditional structural forms in the best proportions and giving careful attention to the details. In fact it has been said that house designing is largely an assembling, into pleasing general proportions, of carefully designed traditional details.

Concrete Construction

By DeWitt Clinton Pond, M.A.

FOURTEENTH ARTICLE

WITH regard to the discussion of design of columns, footings, and floor construction in the 395 Hudson Street Building, it may be noted that in all calculations given in the previous articles very little reference has been made to flat-slab design. As almost all of the floor construction is of this type of design, the calculations in this article may be regarded as typical for most of the work throughout the building. Fig. XVI shows the structural plan of the section of the second floor which has been selected for consideration. Figs. XVII and XVIII show the band and slab schedules which should accompany such a plan. It will be noticed that the plan calls for two-way reinforcing and that the bands are designated as *A1*, *A2*, etc., and that the slabs are noted as *S1*, *S2*, etc. The bands include the outer and column-head sections, and the slabs correspond with the inner sections.

In the typical floor construction there were 2 inches of fill and 1 inch of finish over the slab. By referring to Fig. XVI, it will be noted that the panels are about all the same size, measuring 20 feet by 20 feet square, and that drop panels are indicated on the plan. The first calculation will be for the determination of the thickness of the slab, and the formula $t = .02 \times L \times \sqrt{w} + 1$ will be used. It will be necessary to determine the value of w . As the live load for the typical floor was taken as 200 pounds, and as the slab will be assumed to be 8 inches thick, the unit live and dead load on the floor can be found by adding the following loads:

Live load.....	200 pounds.
Slab.....	96 "
Finish.....	25 "
	—
	321 "

It is now possible to substitute in the formula and determine the thickness of the typical slab.

$$t = .02 \times 20 \times \sqrt{321} + 1$$

$$t = 8.2$$

From this result it will be decided to make the typical slab $8\frac{1}{2}$ inches thick. The effective depth will be determined

upon the basis that $\frac{3}{4}$ -inch round rods will be used and placed 1 inch above the bottom of the slab. From the top of the slab to the centre of the steel the distance will be 7.12 inches. The next step taken by engineers in carrying out their design was the determination of the stress in the steel in a typical band. The formula for the moment in the outer section is $M = \frac{1}{8} \times WL$. W —determined upon the basis of an $8\frac{1}{2}$ -inch slab—is found by means of the following calculations:

$$\begin{aligned} \text{Total load per bay} &= 327 \times 400 = 130,800 \text{ pounds.} \\ \text{Weight of drop panel} &= \frac{1,600}{132,400} \text{ "} \end{aligned}$$

$$f_s = \frac{132,400 \times 20 \times 12 \times 8}{80 \times 7 \times 7.12} = 63,700 \text{ pounds.}$$

$$A_s = \frac{63,700}{16,000} = 4 \text{ square inches.}$$

At the time the building was under construction it was more difficult to obtain $\frac{3}{4}$ -inch rods than $\frac{5}{8}$ -inch bars, so $\frac{5}{8}$ -inch square bars were used.

$$4 \div .3906 = 10.2$$

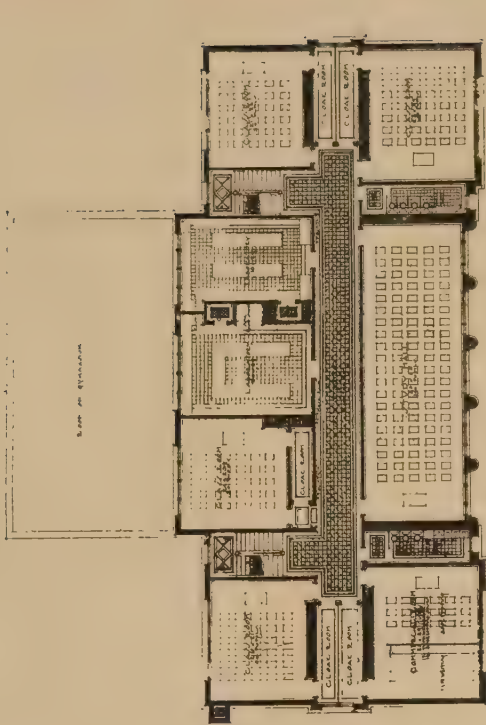
11 $\frac{5}{8}$ -inch square bars will be used.

By referring to Fig. XVII it will be seen that the typical band, which is denoted by the letter *A1*, has this number of bars.

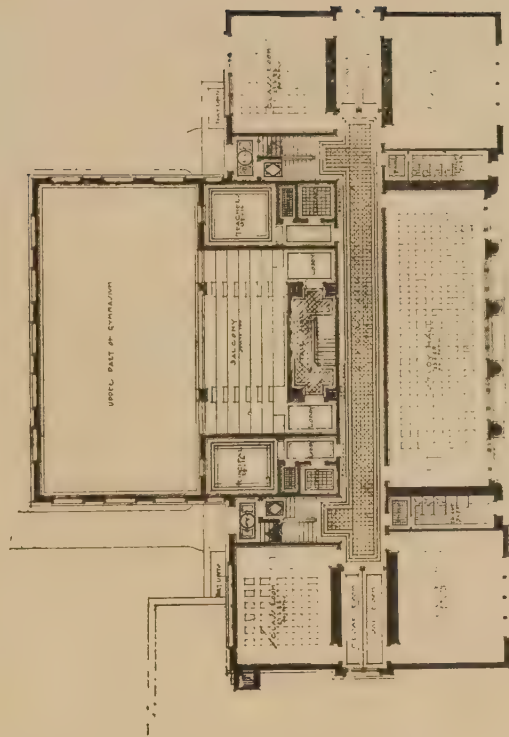
It will be noted that the calculations given above do not follow the order of the calculations given in Articles Twelve and Thirteen. In the present case the author is following the order used by the engineers who designed the concrete work for the 395 Hudson Street Building.

The next calculation is for the purpose of determining the area of steel required in the semicontinuous bands. The moment in the outer section of an exterior panel must be

(Continued on page 224)



SECOND FLOOR PLAN
SCALE 1/8" = 1'-0"



FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

HIGH SCHOOL, GROTON, N. Y.

C. W. Clark, Architect.

(Continued from page 222)

increased 20 per cent, but as the panel is somewhat smaller than the interior ones and the span is not as great, it is usually only necessary to add one bar to the typical band steel, as will be shown in the following calculations.

Fig. XVI shows the typical exterior panels as having a dimension of 20 feet from the column centre line to the building line. The columns are set back 5 inches from the building line. The columns have an average dimension perpendicular to building line of 1 foot 10 inches, and the distance between column centre lines is 18 feet 8 inches. The average exterior panel will measure 18 feet 8 inches by 20 feet. The ratio— n —is less than 1.1, so the calculations will be the same as for a square panel, with L having a value of 19 feet 4 inches. As the slab extends to within 5 inches of the building line, the load on the panel will be taken as for an interior one.

$$f_s = \frac{132,400 \times 19.33 \times 12 \times 8}{80 \times 7 \times 7.12} = 61,600 \text{ pounds.}$$

If 20 per cent is added to this the stress in the steel will become $61,600 \times 1.20 = 74,000$ pounds.

$$A_s = \frac{74,000}{16,000} = 4.62 \text{ square inches.}$$

$$4.62 \div .3906 = 11.8$$

For A_2 use 12 $\frac{5}{8}$ -inch square bars. It will be seen that this number is only one more than that required for the typical interior band.

The next step is the determination of bending in the column-head section, or, in the present case, the engineers have combined their calculations and have determined the stress in the steel. It will be recalled that in a previous article the thickness of the drop panel was determined, after which the area of steel was found. In the present case the engineers have assumed the thickness of the drop, determined the area of steel and then checked to find if the compression developed by the concrete would be equal to or greater than the tension in the steel. Assuming a $3\frac{1}{2}$ -inch drop, the total thickness, from the top of the slab to the bottom of the drop, is 12 inches, and as there are two layers of steel, d becomes $10\frac{1}{4}$ inches. The formula for bending in the column-head section is $M = \frac{1}{3}WL$, and by dividing this by $\frac{7}{8}$ of the depth it is possible to determine the stress in the steel.

$$f_s = \frac{132,400 \times 20 \times 12 \times 8}{32 \times 7 \times 10.25} = 110,700 \text{ pounds.}$$

$$A_s = \frac{110,700}{16,000} = 6.92 \text{ square inches.}$$

Use 18 $\frac{5}{8}$ -inch square bars.

In the last article attention was called to the requirement that the negative moment over the first interior row of columns must be increased 20 per cent over those specified for corresponding interior panels.

The area of steel required over the first interior columns will be 8.30 square inches. Twenty-one bars, $\frac{5}{8}$ -inch square, will be required.

Another requirement, which was mentioned in the last article, was that the negative moment at the wall on the

column-head section shall never be considered as less than 80 per cent of the corresponding moment at the first interior row of columns. In accordance with this rule there will be 6.65 square inches of steel required over exterior columns. In this case it will be necessary to use 17 $\frac{5}{8}$ -inch square bars.

The next step in the design is checking the allowable compression in the concrete. As a side of a drop panel must be at least one-third as long as the panel length, in the present case the drop will measure 6 feet 8 inches square. The area of concrete in compression will be as wide as the drop and as deep as three-eighths of the slab depth. The allowable unit stress on the concrete as given in the code for this condition is 750 pounds per square inch. The average allowable stress will be 375 pounds. With an area 80 inches wide, three-eighths of 10.25 inches deep, and an allowable average stress of 375 pounds, the allowable stress in the concrete is given by the following calculations:

$$\frac{3}{8} \times 10.25 \times 80 \times 375 = 115,300 \text{ pounds.}$$

In the previous calculations f_s was found to equal 110,700 pounds at the column-head section, so, as the concrete can withstand a compressive stress greater than this, the depth of $3\frac{1}{2}$ inches assumed at the beginning as proper for the drop is correct.

The next check is to determine if the drop is large enough to develop proper unit resisting shear in the concrete. The area of the panel is 400 square feet, the area of the column head is 15.9 square feet, and the area of the drop is 44.4 square feet.

Checking the shear at the edge of the drop the following results will be obtained:

$$(400 - 44.4) \times 321 = 114,100 \text{ pounds.}$$

$$b = 4 \times 80 = 320 \text{ inches.}$$

$$d = 6.87 \text{ and } \frac{7}{8} \times d = 6.00 \text{ inches.}$$

$$b d = 1,920 \text{ square inches.}$$

$$114,100 \div 1,920 = 59.5 \text{ pounds.}$$

As the allowable unit shear is 60 pounds, the drop is large enough as far as its area is concerned.

Under ordinary circumstances it is customary to check the shear as the column capital, but in the present case the capital was made much larger than required for the panels under consideration. There are other panels in the building which are larger than the ones designed in these articles. The capitals for these panels had to measure 5 feet and 6 inches in diameter. In order to speed the work of erection the engineers decided to keep the capitals all the same size, so, although the code would call for capitals measuring only 4 feet 6 inches in diameter, they were made 1 foot larger. From the calculations in previous articles it is obvious that there would be no danger of failure through punching shear at the column capital.

The next item on the design sheet of the engineers is the design of the slab steel. This is simply the steel in the inner section. The formula for determining the bending moment is $M = \frac{1}{18} \times WL$.

$$f_s = \frac{132,400 \times 20 \times 12 \times 8}{7 \times 133 \times 7.12} = 38,300$$

$$A_s = \frac{38,300}{16,000} = 2.39$$

Use 10 $\frac{1}{2}$ -inch square bars.

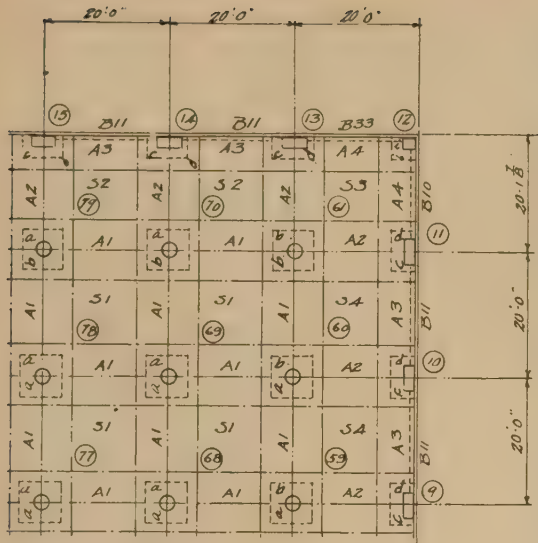


FIGURE 16

Band Schedule														Note: Lap=Lap Beyond 1/2 Column.	
Mk.	Total No	Width	Square Steel										Remarks	Near Col.	
			Total No	Size	No	Length	Lap	No	Length	Lap	No	Length			Lap
A1	120	10'-0"	11	5/8"	11	20'-0"	6'-0"								24
A2	36	10'-0"	12	5/8"	6	26'-3"	6'-0"	6	14'-3"						10
A3	30	5'-8"	6	5/8"	6	20'-0"	6'-0"								14
A4	6	5'-8"	7	5/8"	3	26'-3"	6'-0"	4	14'-3"						12

FIGURE 17

Slab Schedule										Note: All Slab Bars to Lap 9' Beyond 1/2 of Column.	
Mk.	Total Slab No	Slab Thickness	Steel						Remarks	Near Col	
			Bars Run N. & S.			Bars Run E. & W.					
			No	Size	Length	No	Size	Length			
S1	51	8 1/2"	10	1 1/2"	20'-0"	10	1 1/2"	20'-0"		111	
S2	30	8 1/2"	65	1 1/2"	14'-3" 26'-3"	10	1 1/2"	20'-0"		49	
S3	2	8 1/2"	65	1 1/2"	14'-3" 26'-3"	5	1 1/2"	26'-3" 14'-3"		12	
S4	17	8 1/2"	10	1 1/2"	20'-0"	5	1 1/2"	26'-3" 14'-3"		158	

FIGURE 18

Additional Steel in Top of Slabs, Beams and Girders at Supports				
Location	No	Square Steel		
		No	Size	Length
a	132	7	5/8"	12'0"
b	53	9	5/8"	12'0"
c	35	4	5/8"	12'0"
d	30	5	5/8"	6'9"
e	2	2	5/8"	6'9"

FIGURE 19

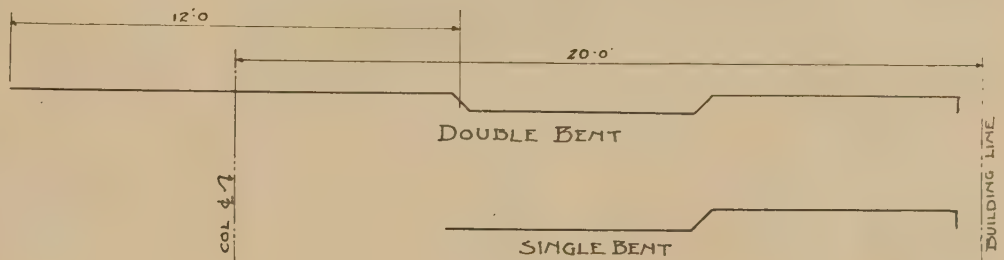


FIGURE 20

In the semicontinuous slabs, adjacent to the wall, the calculations will be slightly different, as the panel is smaller.

$$f = \frac{132,400 \times 19.33 \times 12 \times 8}{7 \times 133 \times 7.12} = 37,100 \text{ pounds.}$$

If 20 per cent is added to this the stress in the steel will become 44,500 pounds, and A_s will equal 2.78 square inches, and 11 1/2-inch square bars will be required.

This completes the calculations for such slabs and bands as are shown in Fig. XVI. In Fig. XVII the number and size of the bars in the bands are given. In the half-bands at the walls, which are noted in the figure as 5 feet 8 inches wide, one more than one-half the number of bars in the full bands are called for. The lengths called for in the schedule depend upon the method of bending the steel. In the case under consideration single-bent bars are used and are carried from point of contraflexure to point of contraflexure. These will be 20 feet long, in the typical interior bands. In the semicontinuous bands one-half the steel is double bent and the other half single bent. The half which is double bent extends beyond the first line of interior columns to the point of contraflexure at one end, and to within 3 inches of the edge of the slab at the other end, where it is hooked 6 inches. In the present case the engineers did not select the point of contraflexure as at one-quarter of the span length, but at a point located at three-tenths of this distance, which

gives a lap of 6 feet. Adding this dimension to the span length, and allowing for the length taken up by the bends and the hook, the total length of the double-bent bars will be 26 feet 3 inches. The single-bent bars will only extend to the point of contraflexure on the exterior side of the first line of columns, so these will be 12 feet shorter than the double-bent bars. This will give a length of 14 feet 3 inches, as shown in Fig. XX.

With this method of laying out steel it is necessary to add bars over the tops of columns, which in this case will run from one three-tenths point to the other three-tenths point, a length of 12 feet. These bars are called for in the schedule shown in Fig. XIX. Over the interior columns there will be required 18 bars. Six will be bent up from one side and 5 from the other, which will give a total of 11 bars. There will be 7 more required as called for at a. At the first interior line of columns, however, there will be 21 bars required. As there will be 12 bars bent up, there will be 9 additional bars needed, as noted at b. At c only one more than half the number required at a will be used, or 4. At d, 17 bars are called for in accordance with the calculations given above. As 12 are bent up, 5 more will be added.

At column 12, 6 bars will be bent up from A4, and as 8 are required, 2 will be called for at i.

The slab schedule will need no explanation, as the length of the bars are determined upon the same basis as the length of band steel.



The Adler Shoe Store, New York City

THE Adler Shoe Company has various stores in New York City, the construction of the upper portion of the show-front being entirely of wood and the design tending toward Gothic.

In laying out their new store at 121 West 42d Street the idea uppermost was to construct the front of a material more lasting and more beautiful than the wood used in the other stores and still retain a somewhat similar line. This was accomplished by the use of imitation or cast travertine stone designed in English Gothic.

The unsightliness of the majority of electric signs and the tendency on the part of the city authorities to eliminate them as much as possible was an incentive to include the sign in with the store-front design, thereby making for harmony and at the same time retaining the commercial feature.

One of the points which can be severely criticised in a great many of the modern store-fronts is that the space between the glass and the under portion of the sign is not illuminated at night. To obviate this trouble concealed reflectors are placed in the soffit of the cornice, shedding a diffused light over the store-front, making it attractive without being unduly brilliant.

The show-window entrance has a groined ceiling also of travertine. Coming into the store we enter an entrance or foyer hall treated with travertine walls and vaulted ceiling, which work rests on a Botticino marble base.

The store proper, or selling space, has the wall-cases broken up by travertine display-cases, and the rear wall is arranged with a centre show-window with staved-up doors on either side.

The show-windows both in the front and the rear are laid out with three-quarter engaged columns with a coved ceiling pierced with penetrations. In these penetrations are set wood frames so as to relieve the monotony of a wall, all of travertine.

The woodwork throughout is of chestnut finished like old English oak.

The store ceiling and cornice is hand-finished antique finished in old ivory.

The work was designed by Elias, Rothschild & Co., Inc., of which Henry S. Lion is the architect.



Foyer.



Salesroom.

An Office-Building in South America

Robert M. Farrington, Architect



Entrance to Banco de Bogota.

THE Edificio Lopez, or Lopez Building, at Bogota, Colombia, South America, in addition to its other attributes, can boast of the following record-breaking facts: It is the highest business building in Colombia. It is the first reinforced-concrete building in Bogota. It contains the first elevators operated in Colombia, and it is the largest business building in the country.

The building was erected by Pedro A. Lopez & Co. at Bogota, which is the capital of the country.

Bogota is eight thousand seven hundred feet above sea-level; it is the land of perpetual spring. The city was settled by the Spaniards in 1540, is six hundred miles from the coast, and has no railroad connection. Consequently when the river is dry or low, as it frequently is, much difficulty is encountered in getting material to Bogota. Specifications are practically useless, for starting out with the idea of using one material and being unable to procure it at the time, something else must be substituted.

There are no general contractors in Bogota and no trade-unions; all work is done by sort of a day's work process. There are no sash and door factories and no planing-mills. All this sort of work is done in small shops, of which there are a thousand and one, where a man can turn out only a small amount of work. We maintained a sort of training-school on the job, and taught the men to make the forms for the concrete, to bend the steel, and to mix the concrete, as well as many other things. We had a sample door made and a sample window of each type, fixing the value according to the time it took to make, and gave out about twenty contracts to as many different men, all work being done

on the premises. On another job which the architect had in Bogota, where it was necessary to have about two hundred windows turned out in a reasonably short time, he had a sample window made and invited several carpenters to come and inspect it before making up their own lot; the result was that we had many different windows, as the various men only carried away a general idea of what was wanted, and finished the work according to their own taste.

The entire piping system was ordered from the States, but did not arrive in time, so when ready to install the fixtures, the following method had to be invented to carry the waste and soil. All of the upright pipes are of terracotta and all of the connecting and horizontal pipes are of copper. The copper pipes are exposed on the ceilings below and are regularly polished and present a rather artistic effect. It was fortunate, however, that the building was not a hotel with a hundred or more bathrooms, as this copper work was a long and tedious job. On the other hand, it only goes to prove that resourcefulness is sometimes better than a good specification. There are no vent-pipes in connection with the plumbing work of this building.

We tried a small sample of electric conduit work, and finally gave it up as a bad job. The wires are run below the floors supported to the wood sleepers by china insulators. The usual method here is to run all wires exposed. To instruct a body of inexperienced workmen, especially with a limited knowledge of the Spanish language, in all the intricacies of conduit work was proved impracticable.

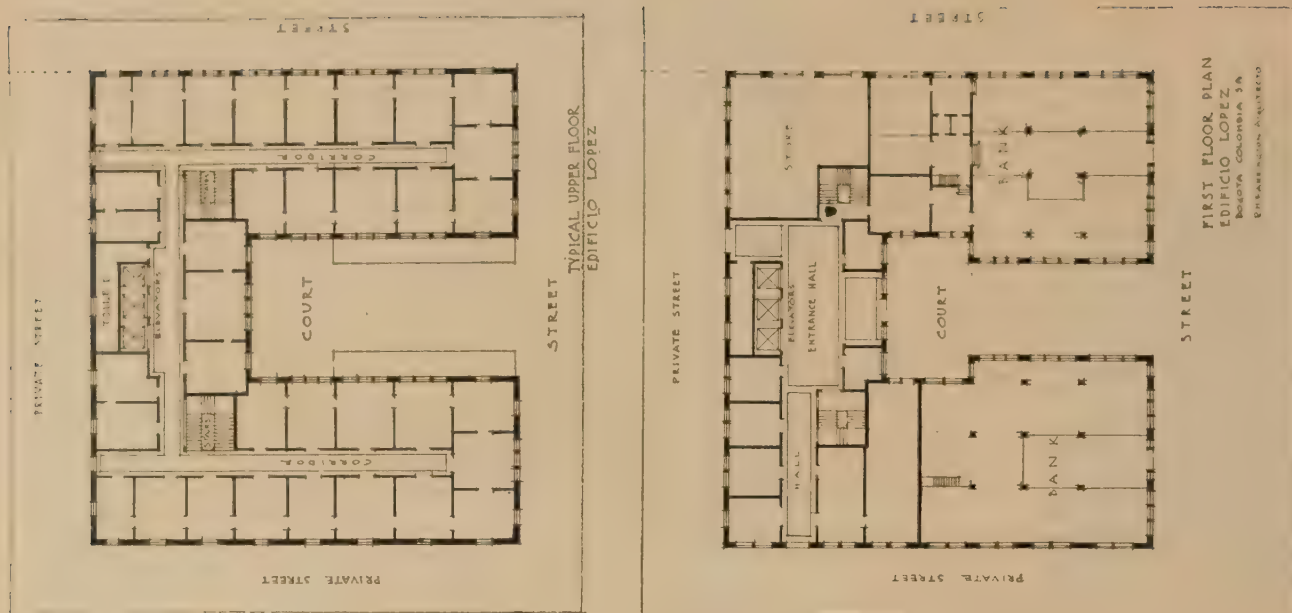
Most of the ordinary door-locks made in the States are what is known as reversible; that is, by taking them apart you can turn the strike over and make it fit a left-hand or right-hand door. Possibly many locks came here from Europe that were not reversible, or perhaps the Colombian carpenters never knew they could reverse a lock; at any rate, the usual process is to put the lock on the door, and if the door is a right-hand door and the lock is a left-hand lock, the lock is put on upside down, which is the only way it could be put on. It is safe to say that half the door-locks in Bogota are upside down. The architect was obliged to correct 90 per cent of them in the Lopez Building.



Entrance to Edificio Lopez.



Entrance to Banco Lopez.



EDIFICIO LOPEZ, BOGOTA, COLOMBIA, S. A.

The Lopez Building is entirely of reinforced concrete, with curtain walls of brick between the columns, forming the exterior walls. It is approximately two hundred feet square, is on a corner of two streets, and has a private street on each of the other two sides.

Robert M. Farrington, Architect. Abell, Smalley & Myers, Equipment Engineers.



CONFERENCE-ROOM, BANCO LOPEZ.



BANKING-ROOM, THE COMMERCIAL BANK OF SPANISH AMERICA.
Robert M. Farrington, Architect. Abell, Smalley & Myers, Equipment Engineers.
The upper floors contain about one hun-



BANKING-ROOM, BANCO LOPEZ.



BANKING ROOM, BANCO LOPEZ.

There are two banks on the main floor, one a local bank, the Banco Lopez, and the other a branch of the Commercial Bank of Spanish America. The upper floors contain about one hundred offices, which are occupied by lawyers, oil companies, etc.

Announcements

According to a recent survey of the Copper and Brass Association, the aggregate annual repair bill of homeowners in this country will this year amount to \$540,041,769 for one item alone—the replacement of rusted sheet-metal work, including leaders and gutters, valleys and flashings.

It is estimated that there are in use in this country at the present time 5,175,000,000 feet of leaders and gutters and that about 1,000,000,000 feet is renewed annually.

The cost of replacements of rusted iron and steel pipe in plumbing is placed at \$86,500,000 annually, making a total annual rust bill of approximately \$626,500,000.

Of every dollar spent in residence construction, 36.1 cents is spent for masonry, 29.1 cents for carpentry, 8.7 cents for heating, 6.5 cents for painting, 6 cents for electrical work, 6 cents for plumbing, 3.5 cents for sheet-metal work, 2.9 cents for roofing, and 1.2 cents for hardware.

The survey shows that the four last-named items—plumbing, sheet-metal work, roofing, and hardware—are the heaviest contributors to the nation's annual repair bill.

It is estimated that between four and five billion dollars will be spent this year in new construction, a large part of it residential.

Of this amount, approximately \$240,000,000 will be spent for plumbing, \$140,000,000 for sheet-metal work, \$116,000,000 for roofing, and \$48,000,000 for hardware.

R. S. Pringle, architect, announces that on June 1, 1922, Francis P. Smith, formerly Professor of Architecture at Georgia School of Technology, became associated with him for the practice of architecture under the firm name of Pringle & Smith, 1417-1421 Atlanta Trust Company Building, Atlanta, Ga.

A specification handbook, rewritten and revised, has been issued by the Truscon Laboratories, Detroit, Mich. It contains complete specification data and forms on integral waterproofings, damp-proofings, cement floor hardeners, wood preservatives, steel paints, mill white paints, and architectural varnishes. Because of the value of the book, general distribution is impossible. Copies will be mailed, on written request, to architects, engineers, contractors, factory managers, and others sufficiently interested.

A National Slate Association

TO give the public greater knowledge as well as to extend and promote the use of their products, the slate-producers of the country met in New York in April, and organized the National Slate Association.

O. Bowles, of the U. S. Bureau of Mines, pointed out some of the advantages that would accrue to the slate industry through the activities of an organization.

The ability to effectively meet outside competition is one of the most prominent advantages, for new competitors are constantly appearing. Organization also enables manufacturers to standardize and simplify products, to find new uses for waste, and to exchange ideas on the most modern methods and equipment.

W. A. Durgin, chief of the Division of Simplified Practice of the U. S. Department of Commerce, outlined the

service to industry his division was prepared to give. The report of W. H. Smith on the freight-rate situation showed that slate is suffering under a handicap of a higher freight cost than all other construction materials. He believed that the industry's plea before the Interstate Commerce Commission for relief will be favorably acted upon for the benefit of the public.

Sullivan W. Jones, chairman of the Structural Service Committee of the American Institute of Architects, on behalf of that body offered its co-operation to the producers of slate in the service of the public. Mr. D. Knickerbacker Boyd, structural standardist of Philadelphia, outlined many of the steps already taken by the slate industry to eliminate excess varieties of sizes on types of slate installations.

Mr. L. E. Kern, of the American Institute of Architects, also discussed co-operation between architects, producers, and the public.

Trade Association Progress Shown at Building Conference

ONE of the interesting features of the recent Building Conference meeting held by the National Federation of Construction Industries at the Drake Hotel, Chicago, was the several comprehensive displays illustrating the progress that has been made by the various Trade Associations.

Apart from the larger displays by the Bureau of Standards and Federated Engineering Societies, one particularly commended was that installed by Mr. H. S. Brightly, Service Engineer for the Indiana Limestone Quarrymen's Association, Bedford, Indiana, which showed the progress that has been made in the adoption of a uniform classification for a building stone, standard specifications, and standard practice relating to the furnishing of samples.

A noteworthy feature of this display was the absence of all matter not relevant to the subject of standardization, simplification, and elimination of waste.

Industrial Construction Increasing

THE volume of industrial construction, which has been lagging behind during the past year, is now gradually increasing, according to Louis H. Bean, Vice-President of Dwight P. Robinson & Company.

Mr. Bean says: "An increasing demand for goods is gradually taking up the slack in available manufacturing space and many industrial companies are now proceeding with new plants and extensions, as indicated by new contracts we received during the month of March. We have been authorized by the Denkmann Lumber Company to design and construct a complete electrically driven sawmill at Denco, Miss., together with a village of about fifty houses, schools, churches, etc., and additional work at the Denkmann plants at Canton and Pelahatchie, Miss., and also to design and construct a new sulphur mining plant at Hoskins Mound, Texas, for the Freeport Sulphur Company. This latter work will be done under the direction of Cloyd M. Chapman."



THE DORMITORY BUILDING.



THE ENTRANCE-HALL TO DORMITORY.

BLISS ELECTRICAL SCHOOL, TACOMA PARK, WASHINGTON, D. C.

Frank Jackson, Sr., Architect.



THE DINING-HALL.



DINING-ROOM.

Frank Jackson, Sr., Architect.

BLISS ELECTRICAL SCHOOL, TACOMA PARK, WASHINGTON, D. C.

(Continued from page 210.)

The façade is broad and generous in extent, of inspiring ensemble, and is admirably located in one of Chicago's most attractive parks. The structure, due to its superb location, amid wide stretches of open park areas, can be seen over lagoon and from spacious driveways in proper perspective, and presents at a glance its broad extent of plan, also beauty of proportion and of architecture.

The centrally located dome dominates in a striking way, yet with rare charm and grace. The entire structure, and the combination of columns, colonnades, refinement of architectural detail and of sculpture make it a most noteworthy building and worthy of preservation for all time.

It was designed by Charles B. Atwood, an architect of eminence, who was associated with Daniel H. Burnham, the directing architect in general of the World's Columbian Exposition. The main central pavilion was suggested by Bénard's "Grand Prix de Rome" drawing, but Mr. Atwood refined and changed the detail. He designed the structure in accordance with this central motif and produced a result that will live as long as art has any direct appeal to mankind.

The building has been used since the World's Fair period to house a great collection of natural history and was temporarily known as the Field Museum. This great collection has been recently moved to its spacious new home in Grant Park.

The exterior of the Fine Arts Building is in a state of disintegration due to the condition of the plaster veneer, which was not originally intended to be permanent. This has led to the general belief on the part of the public that the building was no longer safe and that, due to its seemingly dilapidated condition, it would soon be wrecked. This brought forth many expressions of regret, but there was no movement to counteract this impression, and in consequence there was great danger that the building would be destroyed. It was at this critical time that the Municipal Art Committee of the Illinois Chapter took active interest in the project to preserve the structure, and as a first move brought to the attention of the public the actual condition of the building.

The Fine Arts Building was erected to house priceless works of art in which foreign governments were particularly interested, therefore care was exercised in its construction. The main walls are of brick, two feet thick, resting on concrete foundations and the general structural features are sound.

It would be especially appropriate for a great school of industrial design. Its purity of style, expressing a universality of art and architecture, would be an inspiration to the student, stimulating him to greater effort, and thereby encourage a creative art worthy of American genius.

True progress must be founded on a knowledge of the great past and of those principles underlying all enduring art. It is, therefore, fitting that such a noteworthy building that embodies these necessary requisites, also historic significance and opportunity for service, should be of particular interest to the American Institute of Architects.

It is their responsibility—their opportunity—to lead the thought of America in matters of this nature.

It is with pleasure, therefore, that I am able to state for the Illinois Chapter, A. I. A., that the movement toward restoration of this famous building is under way.

The public, the press, civic organizations, and prominent clubs have strongly indorsed the project as proposed by the Municipal Art Committee, and the movement is gaining strength.

The Second Congressional District, Illinois Federation of Women's Clubs, have led the way and have tendered the Illinois Chapter the first instalment of money necessary to restore the northeast corner of the east pavilion as it appeared originally. The purpose of the first restoration is to show the contrast between a section as it appeared during the World's Fair and the present dilapidated condition of the building. This striking contrast, together with the publicity and education already entered into, will bring the issue clearly before the public for decision.

JUNIOR CLASS.

Any graduate in architecture of a school recognized by the Institute is eligible as a Junior upon submission of proof of his graduation, provided application is made within one year of graduation.

The Junior affiliation shall expire automatically when the Junior reaches the age of thirty, unless previously terminated by the advancement of the Junior to Membership or Chapter Association, or by his resignation, or by the Board of Directors for any cause it may deem sufficient.

In his application the Junior shall agree to be bound by the disciplinary rules of the American Institute of Architects, and it shall be competent for the disciplinary committees to consider and dispose of any charge of unprofessional conduct made against a Junior under the established disciplinary procedure of the Institute.

Every person desiring to be admitted as a Junior shall submit his application to the Board of Directors, upon a form authorized by the Board. The annual dues of \$5, or a pro rata portion thereof on a quarterly basis must accompany the application.

When an application, in proper form, is received by the Secretary of the Institute the applicant shall be declared elected a Junior and the membership of the Institute shall be notified accordingly.

Juniors shall receive the Journal of the Institute. They shall also receive the Proceedings of Conventions and such other Institute documents as the Board may direct. A Junior may use after his name the unabbreviated affix "Junior, American Institute of Architects."

A Junior shall not be a corporate member of the Institute, nor shall he have any interest in or claim against the property of the American Institute of Architects, nor be entitled to vote in any Convention of the Institute except on the sense of the meeting. He shall not be entitled solely on account of his Juniorship to claim affiliation with any Institute Chapter except that he shall have the privilege of attending meetings. He shall not exercise any privileges granted to Members in these By-Laws, except those specifically granted to him.

Juniors shall be designated by the affix "Junior, American Institute of Architects."

The disciplinary procedure set forth in this section shall apply in principle to Juniors with the exception of the fourth paragraph, which has no application to Juniors inasmuch as they have no relationship with the Chapters and are not amenable to Chapter disciplinary action.

The annual dues of a Junior shall be Five Dollars, which will include one year's subscription to the Journal.

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